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UNPRECEDENTED PROSPERITY THE PROMISE OF THE NEW YEAR FOR THE SOUTH.

THE New Year opens with the prospect for a long period of unprecedented prosperity throughout the South. With over \$2,000,000,000 coming into this section from cotton and cotton products, with the assurance of profitable prices for this year's crop, with diversified agriculture making splendid progress as typified in the many meat-packing houses going up all over this section—a new industry of incalculable importance—there is the assurance of great agricultural prosperity.

To this may be added the amazingly rapid growth of early vegetable and citrus and other fruit culture which now taxes the railroads as tomatoes and strawberries and oranges and grapefruit move northward in ever-expanding volume, to be followed day by day by vegetable shipments from Texas, Louisiana and Arkansas, and then the Carolinas and other States as spring weather moves northward.

Industrial activities find expression in cotton mills and iron and steel work, and in coal mines and coke ovens, all of which are more fully employed at profitable prices than ever before.

Railroads are overcrowded, as in all other sections, and great railroad expansion is inevitable.

Upon good roads the South is spending over \$50,000,000 a year, and still larger sums are going into street building and other municipal improvements.

Shipbuilding is becoming a recognized industry, and while one Virginia yard leads with over \$50,000,000 of work under contract, other yards, all the way down the coast to Texas, are catching the inspiration, and are finding that work pours in upon them more rapidly than they can provide facilities to handle it.

Bank vaults are bulging with money as never before. The spirit of thrift, as voiced in savings deposits, is steadily growing.

The curse of the liquor traffic, with its fearful toll of sin and death and financial loss, is being gradually lessened.

Such, in brief, is the splendid business outlook as the South enters upon the New Year.

An Open Letter to Mr. Charles M. Schwab

Daytona, Fla., December 28, 1916.

Mr. Charles M. Schwab,
Bethlehem Steel Company,
New York, N. Y.

My dear Mr. Schwab:

Your recent speech at Baltimore, giving your reasons for expending \$100,000,000 at the present time in enlarging your plants, regardless of the boom prices which prevail in the machinery market, and the high wages for labor, and other speeches lately made in the East, have set a new standard of thought for the business men of this country. They prompt me to ask you to consider seriously the situation which I have previously outlined to you as to the importance of becoming identified with the development of iron and steel in the South.

Your plants are all situated on or near the coast. They are, as you stated in your Baltimore speech, necessarily dependent mainly upon foreign ores.

I sincerely trust that our country may never have the misfortune to be engaged in war, but if we should be attacked by a strong power, the supply of foreign ores would be instantaneously cut off, just as the supply of Lake ores would be cut off if we should ever become involved in war with Great Britain, and may heaven save us from this. I do not think I exaggerate the importance of this situation. You have studied world conditions and are so fully acquainted with the disaster brought upon Belgium and France by reason of the capture, at the beginning of the war, of a large portion of their iron and steel interests, that you can realize, as few others do, the fearful disaster that would come to this country if such plants as yours and those of other Eastern and Western concerns should be compelled to close for lack of raw material.

With your broad spirit of patriotism and your leadership in this industry, may I not ask your serious consideration to the possibility of extending your operations, that you may thus strengthen your own Company and help to safeguard the future of the nation, by establishing somewhere in the South or Southwest an iron and steel plant. This would give you an anchor to windward as a safety in time of storm. There are strategic locations and properties, the possession of which would enable your company to become a leader in the metallurgical development of these sections to the profit of your company and to the almost limitless good of the country.

In the South and Southwest, where population is rapidly increasing, where business interests of all kinds are expanding, where great cities must inevitably be built and great railroad construction work be done, there is in this way being created a market for every line of iron and steel products. Moreover, the time must soon come when on the South Atlantic and the Gulf coasts, shipyards rivaling those of the North Atlantic and Pacific coasts must be established. Shipbuilding material from Pittsburgh can be landed at Southern ports at a lower freight rate than the yards on the Pacific coast are compelled to pay; but with its steel making potentialities, the South should be encouraging shipbuilding by making all the steel needed for the creation of great shipbuilding activities on the South Atlantic and the Gulf coasts. As you well know, from your control of the Union Iron Works at San Francisco, there is a shipbuilding boom on the Pacific coast. A similar boom must necessarily develop on the South Atlantic and Gulf coasts. Indeed, the signs of its coming are already in evidence. A number of shipyards are now being established and some of them have contracts for building steel vessels. South Atlantic and Gulf shipyards would have many advantages, and in this period of world demand for ships, shipbuilding will steadily increase for many years. It is certain that well-built and well-managed shipyards in these sections would be taxed to the limit of their capacity. You could be a leader in the development of steel making in the South in connection with shipbuilding and in doing so benefit the nation in its broadest interests to an even greater extent than by the \$100,000,000 you are now so wisely spending in the East.

The South has three-fifths of the coast line of the United States, along which it has many splendid harbors and many cities where shipbuilding plants can be established to advantage.

In the interior, the South has 88,000 square miles of coal area, or twice as much as all of Europe and nearly five times as much as all of Europe excepting Russia.

This section has great stores of iron ore. The diamond drill is steadily expanding our knowledge of the extent of the ore in the Birmingham district, and new discoveries are being made of other ore bodies elsewhere, so that there is no danger of a shortage of ores in the South, though there is, as you have lately indicated, a danger of an undue drain upon the supply of Lake ores available under the tremendous

demand on that region. There is also a danger of foreign ore supplies being cut off if we should ever be engaged in war, and if we were absolutely safe against such a possibility, there would be no need for building a navy or creating an army.

The United States Steel Corporation has in its ownership of the Tennessee Coal, Iron & Railroad Company a magnificent property in the Birmingham district. The profits which are being made by this property are demonstrating in actual money the opportunities for such an industry. Unfortunately, the larger development of this property was halted several years ago by the suit of the Government against the Steel Corporation, and until that suit is out of the way, this great property cannot be adequately expanded. I think it safe to estimate that this suit, through halting the enlargement of this plant, with all its adverse influences, has cost the South several hundred millions of dollars and kept the steel interests of this section back ten years as compared with where we would have been but for this action of the Government. Even, however, if the Steel Corporation were at liberty to duplicate in the Alabama district the \$50,000,000 you are spending at Baltimore in new construction work, or the \$100,000,000 you are spending on your three plants, this would not create any valid reason against the building in the South of a plant by your Company. On the contrary, the very activity created by the construction of such plants would expand all business interests, develop the South, the nation's greatest asset, and broaden the local market for the products of all furnaces and steel works in the South.

For years you have been a leader in the iron and steel industry in this country. You are broadening the thought of the whole country as to the almost boundless future of this industry and you are stimulating the patriotism of many who have not thought on lines as broad as yours. In view of these facts, let me very strongly press upon you for serious consideration the magnificent work you could do the country as well as your Company by becoming a leader in the iron and steel and munition making development of the South and Southwest.

Army and Navy officials who have given to the study of the problems which should be faced in preparing against the danger of war the same degree of attention which you have given to iron and steel production agree, as you know, that munition plants and the proposed armor-plate plant should be built in the interior, far away from the Atlantic and Gulf coasts and from the Lakes. They are the foremost experts in America on these questions. The nation will be compelled to heed their advice or be guilty of criminal folly. Moreover, I venture the assertion that the nation will follow their advice just as it followed the advice of those who fought to secure an armor-plate plant in the interior. When the subject was under discussion, and in the hope that private capital would make it unnecessary for the Government to be forced to build its own plants, I urged you and other armor-plate makers to offer to build a plant in the interior provided the Government agreed not to build such a plant, instead of spending as you were doing vast sums in advertising your opposition to a Government owned armor-plate plant. As I said then, every dollar you were spending in opposition was making more certain the passage by Congress of the armor-plate bill.

I do not want to see the Government forced into the building of steel and munition plants of many kinds, but unless you or other leaders in these industries build such plants in the interior, where they will be safe against invading armies and not dependent upon Lake or foreign ores, you can rest assured that the Government will do it. Moreover, if you and others fail to do so, it will be the duty of the Government to build them and become active competitors in these industries. You did not believe that Congress would pass the armor-plate bill, but it did. You and others may not believe that Congress will do what I have here outlined under the conditions stated, but it will, and the country will back it up in this work. I hope that this may not be necessary, but that will depend upon the action of such leaders in these industries as you and others who hold a position of responsibility as trustees to the nation for broadening and co-ordinating the iron and steel and shipbuilding and munition industries in such a way as to overcome the existing unwise and dangerous concentration of these interests in the East and along the Lakes. As you well know, almost the entire munition business of the country is centered in a narrow strip from Massachusetts to Virginia, covering probably less than 5 per cent. of the country's area.

About 90 per cent. of our steel is produced from Lake ores, and when to these we add foreign ores, we have nearly 95 per cent. of our steel coming from these two sources, liable at any time to be shut off in the event of war. With such a collapse as would follow, the billions staked upon the industries dependent on ores could be destroyed or confiscated by an enemy.

Does not this situation present a great opportunity and a great responsibility to you to lead the nation to a higher plane of safety by developing these industries in the Central South and Southwest?

Someone must lead—Will you not do it?

You have said that manufacturers should not halt in their construction activities because of high costs, and you are backing your words by your acts. Is this not, therefore, the psychological time for you to turn your attention to the South and Southwest?

I need not assure you that this is written in the friendliest spirit and with the highest personal appreciation of you and your associates.

Very truly yours,

RICHARD H. EDMONDS, Editor.

ARE WE A NATION OF SPINELESS COWARDS?

WASNT there a better role that the United States could have played?—that of a true neutral, the friend of all the belligerents; unwilling to profit by the misfortunes of any of them; ever ready to help them compose their differences, with its own hands unstained by "blood money."—Augusta Chronicle.

Yes, if we desired to see barbarism overrun civilization, autocracy destroy democracy, the burglar and would-be murderer of our neighbor go unpunished because we refused to let the neighbor, who was without arms, have our gun to meet the well-armed burglar and murderer; yes, if we were willing to see a brute attack and outrage a helpless woman while we played neutral and said it was none of our business.

In such a case we would have been almost as guilty as the burglar or the ravisher.

But American people, with all the false teaching of the day, have not yet sunk to such depths of infamy.

If we had been true to civilization and to democracy, we would not only have furnished the arms to the Allies, but we would have at least given them every moral encouragement in their struggle. It sounds very fine to be kept out of war, but let not our people for a moment think that if we fail to do our duty, regardless of the cost, the verdict which will be enforced will be "Thou fool, this night shall thy soul be required of thee"—and this will mean everything.

SOUTHERNERS QUITE AT HOME IN SEATS OF THE MIGHTY.

THE large number of Texas and Louisiana bankers who have been drafted to important positions with leading banks in New York is the subject of extended comment in an article recently published by Daily Financial America, New York. The recent appointment of John H. Fulton of New Orleans (a native of Canada, by the way) as a vice-president of the National City Bank was the occasion for the comment, and there follows an enumeration of the dozen or so acquisitions gained from the South by New York banks in recent years. Included in the list are Sol Wexler, who went from the presidency of the Whitney-Central, New Orleans, to an executive post with J. S. Bache & Co.; Beverly D. Harris from Houston, Tex., to vice-president of the National City, and J. Howard Audrey, from Dallas, to vice-president National Bank of Commerce, New York—all of these within recent months.

Southern development of ever-growing importance and magnitude is primarily responsible for the action of the New York banks in reaching out at this time for men who are thoroughly acquainted with business conditions in the sections of the South from which they come. But the movement of Southern men into places of importance elsewhere is not new. It began with the history of the nation, and today's instances are but in line with the historic trend. In statecraft (the Presidents with few exceptions having come from the South till 1850); in law (advocates and also the judiciary); in commerce, finance, literature, all along the line, take the names of Southerners off the lists and the debt of the nation and the world to Southern leaders would be conspicuously shown.

Discussion of the proposal for the nation to erect a belated memorial to Matthew Fontaine Maury revealed the fact that the researches of this great Southerner, whose charting of the ocean floor first made possible the laying of the Atlantic cable, have been largely overlooked by the generation of today. How many are aware that Audubon, the pioneer and the greatest of American naturalists, was born near New Orleans, and, to come closer to the matter that started this discussion, how many New Yorkers know, do you suppose, that James Stillman, who made the National City great, was born in Brownsville, Tex.?

No matter into what saddle the Southerner may come to sit, the country may rest assured that he feels quite at home. He is no stranger to these seats in high places.

How Thousands of Experts Can Be Made to Study the South

THE MANUFACTURERS RECORD learns with great interest that a large number of leading railroads in the South, some States and some individual organizations are beginning to take a very active interest in the suggestion which has been repeatedly made by us that the South should be represented very largely at the next Chemical Exposition, to be held at New York in September.

We have urged that the South should take a full floor and make an elaborate exhibit of its raw materials for chemical interests of every kind, and of its raw materials for manufactures and of the finished product of factories into which chemistry enters.

Every railroad in the South that fails to be adequately represented at that Exposition will fail in its responsibility to the territory tributary to it, and to its own stockholders. But while looking to the railroads for active interest in this exposition and for a full display of all the materials and the products along their lines which touch the chemical or the industrial world, the South should not depend upon the railroads.

At the Exposition held last September the Tennessee Coal, Iron & Railroad Co. had a fine exhibit of its steel rails, of its tool steel and of many by-products which it makes in connection with its coal and coke and iron and steel activities. A few other companies were also represented.

What the Tennessee Company and others did should be duplicated on a larger scale by every great business organization in the South. Cotton in all its varied forms should be displayed to the best possible advantage. The Du Pont Company, for instance, which is making such an endless variety of goods out of cotton, should show every phase of its products in connection with the raw material and the stages through which this raw material goes, wherever this can be done without divulging any business secrets.

The chemical industries of the South—those producing raw materials and those making the finished product—should display their output with the utmost fullness and liberality of space.

Owners of mineral properties, the producers of by-product coke and all the chemical materials which are secured in the manufacture of coke should exhibit.

Southern States having, as many of them have, in State buildings large exhibits of minerals, of cotton and of other products, should have these exhibits brought up to date and carried bodily to the Chemical Exposition.

There are many reasons why a complete exhibit of all the raw materials and finished products of the South into which chemistry enters—and that is practically everything found under the earth or above it—should be made at the Chemical Exposition. But the dominant reason is that at that Exposition there will be in attendance thousands of the foremost chemists and manufacturers of the United States and of foreign countries, investigating every exhibit with a view to seeing where the raw materials for new industries or for existing industries can be found.

This Exposition is not like a great popular exposition which might be attended by a world's fair crowd of unseeing, unknowing masses, who pass down the aisles and exclaim as to the beauty of some particular product or its apparent uniqueness, and go on knowing nothing about it and never having any interest in its investigation.

The Chemical Exposition is the opposite of this.

It is the gathering place of the scientists and capitalists of America. It is the great meeting place where technical skill and brains come to investigate what various interests or sections have to show with a view to combining technical skill and capital with raw material or with finished products with a view to enlarged operations.

No time is to be lost in getting ready for this Exposition. Every day that passes by without active, vigorous work in planning for it and in securing space and in getting the exhibits in shape ready to be transferred to New York in due time to avoid delays at the end will be a day lost from a work which can be made to produce limitless benefits for the South.

The president of the American Chemical Society, under whose auspices these expositions are being held, is Dr. Charles H. Herty, a native of Georgia and for some years in charge of the Department of Chemistry of the University of North Carolina. Dr. Herty as a Southern man is necessarily deeply interested in seeing the South make the largest possible use of this unequalled opportunity. But he cannot do this work alone, nor can the officers of the Chemical Exposition. All that they can do is to co-operate with the South, with Southern railroads and Southern organizations.

If we were at liberty, which we are not, to tell of some of the plans for exhibits to be made from other regions than from the South, the importance of prompt action by all the organizations of this section would be more fully realized.

In this connection some leading central city of the South might seriously consider making an elaborate exhibit of all the raw materials and finished products which it can show from its own vicinity, or, indeed, from an entire State. And then it could go up to New York with an earnest invitation, backed by the necessary money, to make good its promise, and invite the American Chemical Society to hold its next meeting in that city, and to offer to the Exposition adequate buildings for the most elaborate display which could be made of the chemical and metallurgical interests of the whole country. If, for instance, after the South has invaded New York next year with a display sufficient to occupy a full floor, Atlanta or some other central city equal to handling the matter could invite the Chemical Exposition to give a display there and the Chemical Society to hold its annual meeting in connection therewith, it might be possible to bring into this central region thousands of the foremost chemists and manufacturers of the country.

Some years ago the MANUFACTURERS RECORD proposed that the New England Cotton Manufacturers' Association should hold its annual meeting in the South. The directors expressed their interest in the matter, but said that in view of the fact that they had never held a meeting outside of New England, it would be necessary to take a vote by mail of all the members of the association. The opportunity was given to the manufacturers to present the matter to every member of the association, and the vote was overwhelmingly in favor of holding a meeting in Atlanta, which took place at the time of the last Atlanta Exposition.

Several years ago the MANUFACTURERS RECORD undertook to invite the American Iron and Steel Institute, the greatest organization of its kind in the world, to hold one of its annual meetings at Birmingham or some other central point in the South. The matter was urged upon the members for sev-

eral years, until finally, two years ago, a very successful meeting was held in Birmingham, and hundreds of iron and steel men of the country who then for the first time saw the natural advantages of the South became enthusiastic in their praise of this section.

Other great organizations have in the same way been induced to hold meetings in the South. The MANUFACTURERS RECORD would like to see Atlanta, centrally located as it is, with adequate exposition accommodations, always ready to back its words with its money, take up this suggestion and never let up until it secures a meeting of the American Chemical Society, and in connection therewith a great chemical exposition, which would be a revelation to the South of what other sections are doing, a revelation to other sections of what the South could show in raw materials and at the same time a revelation to the people of the South themselves as to the limitless uses to which some of their own raw materials, such, for instance, as cotton, and lumber, and iron, and other things are put.

The way to inaugurate this work is for the South to take in the aggregate a full floor at the Chemical Exposition next September and compel the world's attention by the magnitude and variety of its exhibits.

HOW TO LESSEN THE COST OF GOVERNMENT OPERATIONS.

AT the present time there is much searching about by our lawmaking body for a solution to the pressing problem of the high cost of living.

At least a dozen bills have been introduced into Congress since it began its last session early in December for investigations of the prices of foodstuffs, the establishment of embargoes to prevent further exportation of agricultural products or other similar devices to bring the cost of living down to something approaching the normal conditions of previous years.

The futility of an embargo has been so clearly demonstrated previously by the MANUFACTURERS RECORD that a further discussion of such method of attacking the problem seems scarcely necessary. As a student and a writer of history President Wilson knows history too well in this respect not to be aware of the fact that an embargo would disastrously disarrange our entire commercial system without bringing any compensating benefits. Furthermore, the real motive behind the suggestion has clearly in view other ends than that of a means of relief to the people of this country.

While Congress can never legislate economy or thrift, it can at least leave these as free to unfettered activity as the collective energies of large interests or the common sense and industry of the individual may render possible. The history of restrictive legislation has been almost uniformly against honest combinations and in favor of those actuated by opposite motives. Perhaps the greatest problem today is how best to give freer opportunity for co-operation in our domestic as well as in our foreign trade.

If Congress wants to begin a great movement to lessen costs, it can begin nowhere so well as with itself. With a prospective deficit in funds of approximately \$200,000,000, in spite of individual income and corporation income taxes, and other forms of taxation not customarily resorted to in times of peace, there is a suggestion of the necessity of providing the means for raising more money and resorting to practices whereby less will be spent, or, at least, where none will be spent without due consideration of the need.

The Secretary of the Treasury has come out unhesitatingly in condemnation of the public buildings waste. A true spirit of economy and patriotism should lead every Congressman to withdraw his special bill for his home town, unless it can be shown that an actual saving results from the erection of the building that he and his constituents have in mind. A second's thought will certify that they have to pay for it, after all. For the building in

their community that the rest of the country helps pay for has its multiple counterparts in other sections for which they are taxed in payment. Thus it is estimated that from \$30,000,000 to \$50,000,000 is actually in prospect of being wasted through the perpetuation of a system that takes no account of the real necessities of the situation. Many of the proposed expenditures "smell unto high Heaven" with rottenness. Honesty should compel many towns to withdraw the petitions for public buildings and thus make a good name for themselves, more desirable than postoffice or courthouse buildings.

The situation as to public buildings in small towns is entirely unlike river and harbors improvement work and the leveeing of the Mississippi River. To a large extent, expensive postoffice buildings in small towns are unnecessary, and should not be built wherever adequate facilities can be provided at lower rent than the cost of the interest and the operation of a Government-constructed building. On the other hand, the fight against the Mississippi River Levee bill and against appropriations for river and harbor improvements is without legitimate foundation. These improvements are essential to the broadest prosperity of the country. They increase transportation facilities, so sadly needed by reason of the breakdown of our railroad system, and they enlarge the area of land available for cultivation at a time when it becomes essential to utilize to the best advantage every acre of land that can be redeemed from overflow. Public buildings in small towns merely add to the burden of cost of government for the benefit of the people in the community, whereas river and harbor improvements and the leveeing of the Mississippi River enure to the benefit of the entire nation, and this difference should be fully understood.

The campaign of the New York Sun against the Mississippi River levee work and against river and harbors improvements is a piece of disreputable work, for it is based on an effort to misrepresent the question and to arouse a spirit of antagonism and sectionalism merely because Democrats happen to be in power. The work of the Sun is the worst effort to stir up sectionalism which this country has had for many years. It absolutely ignores, intentionally or from a spirit of jealousy of the South's development, the fact that the upbuilding of this section means the prosperity of the whole country.

Considerable interest has been manifested in the agitation for a two-and-a-half-cent piece. It may be asked how this is going to help. Theoretically, at least, there are several important possibilities wrapped up in the idea. The rejection of the smaller fractional pieces of currency has always gone hand in hand with the era and geography of free spending. The jump of five cents from one price to the next higher must be frequently out of all proportion to the proper rate of advance in the market value of the article. In the adjustment of telephone rates alone the introduction of an intermediate coin would meet the exigencies where the slot device is used, and would result in an enormous saving in the aggregate. An old saying has it that "it is the little things in life that count." They become big when combined. With a difference of one-eighth of 1 per cent. in two estimates submitted, no great corporation would hesitate to study both very carefully before rejecting either.

Again, Congress could do much to put a quietus on indiscriminate appropriations by adopting the half-and-half system, whereby the State would bear its proportionate burden of the cost imposed upon the Federal Government. This has been adopted in the Federal State-aid Good Roads bill, and promises to work to complete satisfaction. Moreover, it stimulates local pride and also tends to closer inspection of the plans under consideration, as well as subjects the subsequent work to a character of scrutiny that assures its meeting the terms of the contract. Along the same line of argument, a general income tax has been advocated on the ground that it will induce everyone to look more carefully into Government expenditures, and at the same time develop the spirit of patriotism through the fact that every man will be made personally interested in his country because he is helping to support it.

Again, the railroads and all other semi-public utilities need every hampering influence removed.

It is to the welfare of the people that no restrictions other than those involving their right doing should be imposed. Last year there was less new mileage built than in any other year since the period of the Civil War, and, barring the interruption then experienced, than for many years before. It is evident that the railroads have not kept pace in this respect with the growth of the country. They are more closely connected with our prosperity than are war orders. If the railroads were given favoring legislation their extension of credits would result in the expenditure in this country of more than \$1,000,000,000 yearly for the next five years in increased mileage and enlarged equipment, thereby facilitating transportation, opening up new areas of lucrative production and stimulating commerce in the great centers of trade. Indeed, at least \$10,000,000,000 should be spent to put our railroads in shape to meet present conditions and the growth of the next five years.

Yet the best that all of these can do is to present fresh opportunities to economy, thrift and legitimate enterprise. Without reference to swollen fortunes or ill-gotten gains, it is true that through the inculcation of the right doctrines and the adoption of the proper methods some men are going slowly but certainly onward to a comfortable competence at all times, while others, and many because of inefficiency, are going at the same time in the opposite direction. If the suggestions here made have any value and the appeals any point, it is to the people themselves, that they are so directed in their ultimate bearing. It is the combined spirit which they manifest that will react on Congressmen and legislation, rather than the lawmakers and the laws on them.

GREAT OPPORTUNITIES FOR FURTHER DEVELOPMENT OF EASTERN KENTUCKY COAL FIELDS.

CONCERNING the great activity in the development of coal lands of Southeastern Kentucky under way at this time, and the still greater opportunities that are not as yet taken up, Mr. W. G. Coutts writes the MANUFACTURERS RECORD from Harlan, Ky.:

This is an immensely wealthy coal and iron section, and capital is taking hold on a big scale.

I find there is an estimate of thirty billion tons in the Bristol (Va.) field, and there are some sixty billion tons of the best coal in America in sixteen of these counties. Southeastern Kentucky has only had a railroad some four years, and see the immense development already!

The mountain section of Kentucky is the greatest undeveloped coal field in the world.

I could name you several interests who own 50,000 to 100,000 acres of fine coal land who are anxious for its development and who could make leases without delay. The same with the iron-ore lands in Virginia.

You can take it from me, Wall Street knows mighty little of the immense opportunity in this part of the South.

In the statement that Wall Street knows mighty little of the immense development opportunities offered in the rich resources of this section around Harlan, Ky., Mr. Coutts is eminently correct. It is an ancient and accepted saying that Wall Street knows the price of all things, but the value of nothing. Development work is often painfully slow, and it sometimes takes generations to impress on the public the demonstrated facts of any given situation.

However, the long-heralded wealth of coal deposits of Southeast Kentucky have now gained a status that insures their continuous and rapidly-accelerated development. The operations of the Consolidation Coal Co. and others are on such a mammoth scale that the resultant new railroad construction, new town building and marketing of high-grade coal and better-than-Connellsville coke of that section are facts looming so large in the public business eye that the remaining undeveloped resources there, great as they are, must shortly receive the consideration to which they are entitled.

At least, with the settlement of the country's affairs to normal conditions after the close of the war, there should be a willingness on the part of capitalists North to give attentive ear to the stories of great opportunities for investment and development South, of which the situation described by Mr. Coutts is a type.

WONDERFUL GROWTH OF THE NATIONAL BANKS.

FIGURES just issued by the Comptroller of the Currency graphically display the astonishing growth and development of our national banks since the beginning of operations of the Federal Reserve System two years ago. During that comparatively brief period their total resources have increased \$4,028,000,000, or from \$11,492,000,000 to \$15,520,000,000, the ratio of advancement being more than 35 per cent.; and, furthermore, this gain of \$4,028,000,000 is not far short of the entire resources of all the State banks, 14,598 in number (not including savings banks), in operation in June, 1915. Besides, while the increase of resources of the national banks from 1904 to 1914 average 6 per cent. annually, it has averaged about 18 per cent. for the last two years. The latest total is based upon the call of November 17, 1916.

Since the spring of 1906 the resources of our national banks have more than doubled. Then they were \$7,670,000,000; now they are \$7,850,000,000 more, and, besides, according to the Comptroller the present total of resources exceeds the total amount of resources of all reporting State, savings and private banks, loan and trust companies at the time of the inauguration of the Federal Reserve System, about two years ago. Furthermore, the total is greater by \$321,000,000 than the total resources of all the reporting banking institutions in the United States, national banks as well as others, as late as 1904.

Still another comparison as evidence of the magnitude of this great total is that our national banks' resources are now about \$1,000,000,000 greater than the combined resources of the Bank of England, the Bank of France, the Bank of Russia, the German Reichsbank, the Bank of Italy, the Bank of Spain, the Bank of the Netherlands, the Bank of Denmark, the Swiss National Bank and the Imperial Bank of Japan, according to the latest reports received from them.

There are some other very interesting facts revealed by the statistics. One of these is that the resources of the national banks in the Southern, the middle Western, the Western and the Pacific States alone (New England and Eastern States being excluded) now amount to more than the resources of all the national banks in the country in 1906, only ten years ago, and the resources of the national banks in the Southern States alone now exceed the total resources of all the national banks in New England and the Eastern States, including the financial centers of New York, Boston, Philadelphia and Pittsburgh, as late as 1891.

From September 12 to November 17 of the present year the resources of the national banks in the South and West increased \$664,000,000, while the increase for the national banks in New England and the Eastern States during the same period was only \$444,000,000. Moreover, the percentage of increase in national banking resources in the South was the highest of any section, being practically 16 per cent. (15.98 per cent. is the exact figure), and the Western States were next, with an increase of 11.76 per cent. The increase in New England was but 3.36 per cent., and the Eastern States 6.84 per cent. The average for the country was 7.69 per cent. The increase during the two years from 1914 to 1916 was thus: New England States, 22 per cent.; Eastern States, 39 per cent.; Southern States, 32 per cent.; Middle West, 31 per cent.; Western States, 50 per cent.; Pacific States, 33 per cent. The total increase in resources since September of this year was \$1,109,000,000.

If the national banking resources of the entire country continue to increase during the next two years as they have done in the two years since the Federal Reserve System was started, they will total in the fall of 1918 nearly \$21,000,000,000. Adding a 35 per cent. increase to \$15,520,000,000, the present total, shows that this would be \$5,432,000,000 more, or \$20,952,000,000.

Truly this is a great age in finance as well as in industry and commerce.

THE ALLIES HAVE RIGHTLY MEASURED GERMANY'S SO-CALLED PEACE PROPOSAL.

IT is well for the sake of humanity and all future civilization that the Allies stand united and determined in their decision not to permit Germany to secure the peace it now so badly needs until that country and Austria and Turkey have paid the full penalty of their murderous campaign to wreck and ruin Europe for their own material aggrandizement, and then to turn, as Germany unquestionably hoped to do, to the domination of all America, including, of course, the United States. Had not the Allies thrown millions of lives and billions of money into their fight for civilization, the time would not be distant when our condition would be worse than Belgium's.

It behooves the right-thinking people of this country, the people who put honor above price, principle above convenience and liberty above slavery, righteousness in nations as well as individuals above unblushing sin, to give the Allies unstinted moral support, that they may know that this country realizes that they are fighting a battle for all civilization, and that if they should fail, civilization and liberty would receive a death blow.

We trust that President Wilson and his cabinet realize the facts fully, and that, however much they may desire world peace, they will keep our country from being used by Germany to save itself from the punishment which it deserves.

Until Germany has unconditionally surrendered, or until it is ready to accept the Allies' terms, there can be no permanent peace nor safety. These terms should be full reparation for all the cost of war, so far as money can express this; full restoration of all the territory it holds in other countries, and the destruction of its power to make war against Europe; and since it has acknowledged to the world that it has no honor where treaties are involved and knows nothing but rapine and murder and the torch and slavery where it thinks its own interests are concerned, it is impossible that the world can accept at face value any treaties and any promises it makes. The perjurer's promise is not good until he has by long years of faithfulness proved the genuineness of his reform; the murderer is not considered a safe man to roam the streets, armed and ready to do murder again when it suits his fancy; the robber is not accepted as a good citizen, with access to bank vaults, and so the civilized world should not accept Germany's pledges at their face value, for she stands before civilization as the international perjurer, murderer and robber.

Vengeance as vengeance is not what the Allies and neutrals desire; but until Germany's repentance is in proportion to her sin, and until her rulers make this known, leniency would be as unjustifiable as it would be for a community, out of a false sentimentality, to let burglars and murderers roam the streets without punishment.

Germany's present attitude is on a par with that of the criminal who says to the law: "I glory in my crime, and if you will let me off without punishment, I will keep only a part of the booty I have stolen."

An old negro, caught redhanded in crime, when he was haled before the bar, refused to plead guilty or not guilty. The judge insisted that he should say something, and the old darky, thus driven into a corner, said: "Well, judge, I am willing to drap the matter right here."

Germany would be willing to "drap" the matter right here if she could persuade the law, as represented by the Allies, to permit it.

WASTE PRODUCTS OF ORANGE GROVES MAY NOW BE UTILIZED.

THE citrus-fruit industry of Florida, and wherever commercially developed elsewhere along the Southern coast, is promised a new element of possible profit by the perfection of a machine for rapidly peeling oranges and grapefruit, and the development of processes for pressing and chemically treating the removed peel, from which sweet orange

oil may be produced in this country of a quality at least equal to the imported hand-pressed product, and at a cost which will make competition with foreign oils possible.

In announcing the results in this line that have come through efforts of specialists in the United States Department of Agriculture, described in Bulletin 399 of the Department, it is pointed out that the newly-developed processes should be of especial interest to Florida, where considerable quantities of cull, waste and low-grade oranges have heretofore remained unutilized each season. The establishment of oil industries not only would furnish a means for making use of fruit heretofore lost or sold practically without profit, but also would furnish a wider market for better grades of fruit, and should tend to bring about the exercise of greater care in the selection of such grades. The fact that the peeling process leaves the fruit intact in its thin, inner skin also makes easy the use of this fruit for the production of other by-products, such as orange juice, marmalade, jam, etc.

The peeling machine, on which the possibility of establishing an American orange oil industry largely has hinged, is a rotating drum which grates the outer peel from the oranges in a finely-divided form. The machine is operated by power, and with it one operator can peel two tons of oranges or three and one-half tons of grapefruit an hour.

It is of collateral interest that for separating the orange oil from the water or juice after pressing treatment with gelatin and tannin has been found the most efficacious method. A convenient source of tannin is available in the stalks of the common law palmetto, found in great abundance near the Florida orange groves, thus providing another to the growing number of uses to which the long unvalued palmetto is found to be adapted.

AMERICA'S CLOSEFISTEDNESS IN GIVING TO WAR RELIEF.

"I HOPE this work for the men who are blind because they fought for their country will appeal to you."—Elihu Root.

These lines are written on a personal card of Mr. Root's, sent to the editor of the MANUFACTURERS RECORD. The card accompanied a reprint from the New York Times of November 12, 1916, of an article by Mrs. George A. (Clara Parsons) Kessler on "The Debt We Owe to War's Victims," which article is a stinging rebuke to American closefistedness at this time of dire need abroad.

Mrs. Kessler, an American woman, writes as honorary secretary of the Permanent Blind Relief War Fund, in an effort to stir the men and women of this country to a realization of their unseemly niggardliness of contributions to the relief of suffering from the war. It is the purpose of the committee she represents and in behalf of which purpose the strong appeal by Mr. Root is made to raise a fund of \$5,000,000 with which to create permanent institutions for the blinded soldiers of France, England and Belgium. The object of this foundation is to make these victims of the war self-sustaining men by teaching them a suitable occupation. The committee is thus engaging in a work of economic rehabilitation, and seeks to establish permanent institutions that will be a lasting monument to our generosity.

Yet, after six months of unremitting toil Mrs. Kessler was able to report collections of only \$225,000, and \$50,000 of that was by Englishmen in London, through the efforts of Lady Paget, an American by birth, whose death occurred a few days ago from illness caused by overzealousness in her many activities in behalf of the war's victims.

Mrs. Kessler declares her amazement at the overwhelming failure her committee met, and it is the evident intention to give the people of the country a chance to wipe out the stain by a belated response somewhat in keeping with the needs of the situation and the profits we have piled up from our war commerce with the Entente Allies.

Estimating these profits at \$2,400,000,000, which is 20 per cent. on the \$12,000,000,000 of this country's foreign trade from the beginning of the war to

the time she wrote, there has been given less than one-seventieth of these profits for all purposes of relief, including \$6,000,000 for Germany and her allies. It is assumed by Americans generally that we have practically kept the Belgians from starving, and it is here demonstrated that we have contributed but \$12,000,000 of \$250,000,000 spent for Belgian relief; \$238,000,000 have been silently provided by nations themselves at war. This \$238,000,000 was sent us by England and France to be spent by us for food and clothing for the Belgians, and out of these supplies we have made a profit of \$47,000,000, assuming an average profit of 20 per cent. on the entire amount. And yet we pride ourselves on a contribution of \$12,000,000 for Belgian relief, and seem satisfied that we have done well in contributing a total of \$34,000,000, the \$6,000,000 to Germany included.

Our relief fund for Belgium amounted to 10 cents per capita, while New Zealand gave \$1.25 per capita for this relief, and Australia more than that. Paderevski secured \$60,000 for Polish relief from a series of musical performances in New York and Chicago, whereas Melba, at a single performance at Melbourne, raised \$70,000. To the Serbian fund we gave \$207,000; France, despite her sacrifice and drains, gave twice as much, and England gave \$8,000,000.

It is recalled that at the time of the Chicago fire, in 1871, England and France sent over \$1,000,000 for relief in money, foodstuffs and clothing.

Need there be any surprise that throughout Europe there is a growing feeling that Americans are shirking their burdens; that we have become a nation of mere money-grubbers, steeped in selfishness, batten- ing on the profits of war, our women revelling in untold luxury, while the women of Europe, in losing sons, husbands and fathers, have suffered sorrows indescribable, and the men have sacrificed themselves in defending the principles and ideals which are our common heritage, and upon the maintenance of which the very existence of this nation depends?

Why shouldn't we be expected to give out of all proportion to anything we have yet parted with?

A MORAL DIFFERENCE OF VITAL IMPORTANCE.

THAT President Wilson was actuated by the highest motives in the issuance of his so-called Peace Note there can be no question, but we do not see why any clear-minded reader of it should be surprised that in every country of the Entente it is regarded as utterly untimely. It is true that in stating that "the objects which the statesmen of the belligerents on both sides have in mind in this war are virtually the same," he was careful to add: "As stated in general terms to their own people and to the world." But even with this important modification will the statement hold good? By what sort of mental obfuscation could Germany and Belgium be classed together as striving or even professing to strive for the accomplishment of the same objects? Our good President is so anxious to be neutral that he finds it hard to be just. As certain as God lives, Belgium and Germany, the wronged and the wrongdoer, do not belong in the same class, and we deeply grieve that the greatest Neutral in the world should even seem to acquiesce in any attempt thus to classify them.—Religious Herald, Richmond, Va.

The Religious Herald states the case clearly. Our country could do civilization and all moral standards no greater harm than to seek to create the impression that evil and good are alike; that the wilful murderer and the innocent murdered are on the same moral plane. We might as well teach that villainess is the same as goodness; that purity and impurity are alike; that the liar and the truth-teller are equally as good or equally bad. If we put Germany and the Allies on the same basis, we would defy the laws of God and man and make of no account all of the teachings of the Almighty against the evildoer.

May our country be saved from copartnership with Satan in such work.

THE Allies might well reply to this country briefly, but forcibly, in the language of the immortal Patrick Henry:

Men cry peace! peace! when there is no peace. * * * But as for me, give me liberty or give me death!"

HANDICAP WOULD BE IMPOSED ON INDUSTRIAL ENTERPRISE BY SUCH UNFAIR PLAN OF TAXING MACHINERY.

AN amazing instance of official stupidity has been brought to the attention of the MANUFACTURERS RECORD, which shows the lack of comprehension some tax commissioners have and the discouragements manufacturers sometimes meet in Southern communities, where they have a right to expect that an enlightened self-interest will assure them a square deal, to say the least. The matter comes before us in the way of a letter of inquiry as to the methods adopted elsewhere for basing taxation on machinery. The substance of the letter follows, with names omitted, in mercy to the place under such official misrule. It would certainly appear that merely to state this case will cause a cure. The letter:

Editor Manufacturers Record:

Hitherto there has been no attempt in this State to tax the personal property of the corporations according to valuations based on inventory costs, but now the corporations are required to submit inventories for assessment. As the person whose duty it is to prepare such inventories for this corporation's southern district, the writer contends that the right way is to start with first cost and deduct a proper percentage, year after year, for annual depreciation, exclusive of upkeep. To illustrate: If it be assumed that 10 per cent. is a proper rate of annual depreciation of an ordinary frame building, costing \$1000 in 1906, its fair valuation in 1901 would be \$900; in 1902, \$810; in 1903, \$729, and so on.

The writer had taken for granted that the principle of making a fixed yearly deduction for depreciation from inventory valuation of structures and machinery was so widely known and firmly established by custom that it was generally accepted, but to his surprise finds that the tax authorities of this county are not only unaware of it, but oppose it. As one of them stated to the writer, "If a piece of machinery be kept in repair and is performing its assigned duty, it is worth just as much now as when new, 10 years ago."

Naturally, one seeks the weight of well-recognized authority to be thrown into the scale, with the object of bringing such an opinion into balance with what is generally accepted on the subject.

Accordingly, if it is not asking too much, will you be good enough to state whether the principle under discussion is sound and recognized and adopted by the manufacturing public?

It seems hardly possible to believe that any intelligent men should undertake to tax machinery on the basis of original cost without allowing for depreciation. The fact that a piece of machinery is kept in repair does not in any way whatever make its value at the end of one or two or three years or any other period as great as it was at the start. Indeed, most machinery gets out of date so rapidly that no machine, it matters not how costly it may be, is worth as much a year after it is purchased as the day it was installed, and this depreciation goes on rapidly from year to year. It is not only a depreciation in the wear and tear on the machinery, but it is the depreciation due to the rapid changes which are constantly necessitating sending to the scrap heap machinery that is apparently good, but which has been supplanted by improved machinery.

You are doubtless familiar with the story in regard to Mr. Carnegie, and the rapidity with which he threw on the scrap pile machinery, even when it had just been installed, when something better was found. It has been said that Mr. Carnegie built a plant at a cost of \$1,000,000, and that by the time it was built and equipped some new method showing a decided improvement over the old had been invented, and that even before the \$1,000,000 plant was put into operation it was sent to the scrap heap and the new installed. Whether this be literally true or not, it at least typifies the conditions as to the value of machinery.

Some years ago, when traveling with Hon. William C. Lovering, then one of the leading cotton mill men of New England, and a number of other cotton mill people, the subject of improved machinery was under discussion. Mr. Lovering said to the writer that he had recently stated to Draper & Company, the largest textile machinery makers in America, that they were a great curse to the trade, in that they were constantly bringing out so many new inventions that the cotton mill people no sooner equipped a mill than it was out of date, by reason of the inventions of the

Drapers, which followed one after another so rapidly.

Of all things in the world, machinery ought to have to bear a light tax. Any manufacturer who did not allow for a heavy depreciation from year to year in his plant, even if he kept it in the best order possible, would at the end of a few years find himself bankrupt, because he would be certain to have to meet competition which would necessitate much of his plant going to the scrap heap, and if he did not scrap equipment, he would be unable to keep up with his competitors.

The fact that the iron interests of the South were for so long a time unable to throw into the scrap heap much of their equipment is to a considerable extent responsible for a good deal of the inability of the Birmingham district to keep up with Pennsylvania and Western iron and steel interests. While Birmingham iron and steel people had for years to put up with old equipment, Eastern and Western iron and steel concerns threw old equipment on the scrap heap and installed modern machinery, and the inevitable result was that this section fell very far behind in the race, so that the percentage of iron produced by the South as compared with the output of the country has steadily decreased year after year for the last twelve or fifteen years.

Similar conditions existed in England about fifteen years ago, and that country was losing its hold on the world's iron trade because it had not modernized its plants, as had Germany and the Pittsburgh district. The British Iron and Steel Institute sent the president, who was a member of Parliament, and the secretary, Mr. Stephen Jeans, one of the world's great metallurgical authorities, to this country to investigate the question of modernization which had then taken place in the Pittsburgh and Chicago districts. By invitation these gentlemen also visited Birmingham. They found wonderful natural advantages, but they also found that the Birmingham district was at that time even farther behind in modern equipment than the English iron and steel interests, and they had no fear of any possible competition from Birmingham until that section could afford to throw away existing plants and machinery, to a large extent, and modernize as they were arranging to have the iron and steel concerns of England do. As an outcome of that visit a number of the foremost iron and steel experts of this country were employed to go to England and take part in modernizing many of the great plants of that country.

These facts all bear upon the question our correspondent has raised as to whether machinery and equipment should be taxed at cost, or whether a yearly deduction from inventory valuation should be made on structures and equipment. As we said at the beginning, we can hardly conceive that men of intelligence, studying the situation or at all familiar with the manufacturing business, could for a moment think of taxing manufacturing structures and equipment at cost.

A piece of real estate may steadily enhance in value with the growth of a city, and justly bear from time to time increased taxes as values increase, but it is not possible for machinery or manufacturing structures to increase in value, nor is it possible for them to do anything but steadily depreciate.

DR. HERTY'S ADVENT AS EDITOR OF JOURNAL OF AMERICAN CHEMICAL SOCIETY.

WITH its January 1st issue the Journal of Industrial and Engineering Chemistry, published by the American Chemical Society, comes under the editorship of Dr. Charles H. Herty, formerly professor of chemistry in the University of North Carolina and president of the American Chemical Society. In an introductory editorial Dr. Herty announces the establishment of new editorial and business offices, the selection of a board of associate editors to co-operate with him, and the appointment of Mr. M. A. Williamson, formerly of the Norton Company, as advertising manager.

In accepting the editorship Dr. Herty states that he was chiefly moved to do so with the earnest

hope that he could co-operate in the co-ordination of the rapidly expanding American chemical industries, the need of which he emphasizes forcibly in the following quotation from the editorial:

"That there is need of co-ordination no one questions; that any exists no one avers. We all know, nevertheless, that the halcyon days of high prices, pressing demand and almost absolute freedom from foreign competition must pass. Will we be ready to meet the grim conditions which then must be faced? Are we not already beginning to suffer from lack of co-ordinated effort? * * *

"The glamour of the successful achievement of American chemists is even now hiding some of the failures which have already occurred, and which are certain to increase if overproduction along certain lines is not avoided. Meanwhile there are many neglected lines, and they must be developed if manufacture is to reach that point of efficiency which will guarantee successful ability to meet world-wide competition. Now is the time for such adjustments. No illegal division of the field is intended, but a common-sense, uniform growth of the whole of the coal-tar chemical industries must be provided for if our great mass of raw material is to be properly utilized and our country freed from outside dependence for supplies of such products.

"We are rushing along blindly, each busy with his own thoughts and plans, while plainly before our eyes are the completely unified industries of each of the great nations of Europe, forced into such unity of national and even international effort by the exigencies of the great war. For such co-ordination of industrial effort facts are needed—facts as to what is now being manufactured and in what quantities. From such data could be readily gleaned information as to where danger of overproduction lies and where need of expansion exists."

In the same issue Dr. Herty also publishes an open letter to the House of Representatives of the Sixty-fourth Congress on the matter of tariff legislation for the protection of American dyestuff industries. In this letter he reviews the efforts that were made to secure duties that would enable such industries to be started and to exist, and points out the changes that were made which tend to lessen the effectiveness of the legislation. Dr. Herty, who is familiar with every phase of dyestuff tariff legislation, strikes out in his characteristically aggressive manner and urges upon the present Congress the need of enacting legislation that will enable the dyestuff industry to be developed in this country.

In his new work Dr. Herty, with his broad knowledge of the possibilities for chemical industries in this country and with his grasp of both the economic and practical needs of such development, will exert a force which should go far toward stimulating the creation of co-ordinated chemical and allied industries that will free this country from its present foreign dependence and bring into development many of our resources which are either lying dormant or are allowed to go to waste.

The MANUFACTURERS RECORD congratulates the American Chemical Society in bringing to the editorship of its Journal such a sterling man as Dr. Herty.

Plans for Tifton's Meat-Packing Plant.

Building and machinery contracts will soon be awarded for the Tifton (Ga.) Packing Co.'s plant. John W. Greer, secretary and treasurer of the C. L. Brooks Engineering Co., Moultrie, Ga., writes to the MANUFACTURERS RECORD:

"We have contract for the engineering on the proposed Tifton meat-packing plant, and are now getting the plans ready so the construction may begin early in the year. The plant is to have a capacity of 350 hogs and 50 cattle daily, and will be built of white sand-lime brick and concrete. It will have a small ice plant for icing its cars. Its cold-storage machinery will have a 60-ton capacity. H. H. Tift is chairman of the directors, and Frank Scarboro is secretary. It is likely that W. W. Banks will be president.

"Tifton is in central south Georgia, 27 miles northwest of Moultrie, surrounded by a magnificent country, and although only 27 miles from the Moultrie plant, there is no doubt that it will have all the livestock it can handle."

Misunderstanding and Misrepresenting the South

Some weeks ago the MANUFACTURERS RECORD made vigorous reply to a letter issued by Mr. Robert Fullerton of Des Moines, Iowa, berating the South for its "Bourbon civilization," to which he attributed the cheapness of its lands. Mr. Fullerton replied to our editorial by sending a clipping from an editorial in a Des Moines paper, based on an editorial in the Columbia South Carolina State, and erroneously, but, of course, unintentionally, said the clipping was from the "State." We are also in receipt of some correspondence between Mr. A. C. Burnett of Cadiz, Ky., and Mr. Fullerton. The slander against the South put forth by Mr. Fullerton would not justify being dignified by a reply but for the fact that he represents a type of people in the North and West who have been too narrow in their views to study the situation with intelligence, as having a desire to know the truth.

In his reply to the editorial in the MANUFACTURERS RECORD Mr. Fullerton said:

Enclosed find reprinted editorial from the Columbia State. This is another evidence of your Bourbon civilization, another reason why your farm lands are in poor demand, why immigration from the more civilized countries of the world are not attracted to your "milk and honey"—which is mostly condensed, from Wisconsin and gathered by the The Corn Products Co. of Chicago.

The correspondence between Mr. Fullerton and Mr. Burnett was called forth by the latter's sending to Mr. Fullerton a circular about a Kentucky farm for sale. To this Mr. Fullerton replied as follows:

I had your circular describing a farm tract for sale in your neighborhood, 1085 acres, for \$65,000. If this farm holding was in Iowa (if your description is fairly stated) it would find ready sale at \$200,000. The MANUFACTURERS RECORD of Baltimore, clipping from which you enclose, criticizes me for calling attention to the difference in the price of farm lands in Southern States as compared with farm lands in Iowa, and goes away back 52 years to explain the reason, which, in my opinion, doesn't explain. Perhaps you could throw some light on the why and wherefore.

To this request for some light on the difference between the value of Southern and Western lands, Mr. Fullerton got a reply from Mr. Burnett which hit straight from the shoulder. It was:

We thank you for yours of the 20th inst. and note same fully. In reference to the 1085-acre farm, description of which we sent you, attached to the clipping from MANUFACTURERS RECORD, is a true description of the farm. No finer farm can be found in the State of Kentucky, with ideal location. It will produce products sufficient to pay a dividend on the sum you say it would sell for in your State, when, if we are correctly informed, a \$200,000 farm in your State will not do so. The tobacco crop raised on this farm this year will sell for over \$100 per acre.

We of the South think the article in the MANUFACTURERS RECORD as to why farm lands sell so cheap is true as Gospel. People of the North do not realize it. I can show you millions of acres of land in the South, with trees on it large enough to make good saw logs, that were in a high state of cultivation, with magnificent mansion houses and comfortable tenant houses, inhabited with cultured and happy people, before Sherman and others burned the buildings, confiscated the livestock and sent the owners and inhabitants of the vicinity scattering as refugees to unknown lands. Our people have made wonderful strides since those awful days. You people can not realize the horror of the war as waged on innocent people by your army officers and as fully carried out under reconstruction period. We are trying to forget those days and happenings and making long strides to place our country where it should be. What the Germans have done to Belgium is nothing to what Sherman and others did to the South. We are getting over it.

As the questions raised by Mr. Fullerton's criticisms of the South, which he put in reprint form and has been sending out to other people, would if unanswered do some harm by misleading people who cannot investigate for themselves, the editor of the MANUFACTURERS RECORD sent him a reply in which the following statements were made:

Your letter of December 21st has been forwarded to me and I have read with interest the editorial which you enclose. This, however, is not as you say, an editorial from the Columbia State, but is an editorial of one of your local papers based on an editorial in the Columbia State. Some of the statements made in this editorial did not, I think, appear in the editorial in the Columbia State. However, these points are immaterial.

No one is more strongly opposed to lynching than I am.

The MANUFACTURERS RECORD has vigorously assailed this crime. Prior to the Civil War and during the war there was no cause for lynching. That is, the negro did not commit the crimes which started the unfortunate curse of lynching, but when during reconstruction days the vilest white men who ever cursed a country came South, and through the power of the negro vote got into political positions, they brought about a reign of terror, of debauchery and of crime such as had never before been known in the South. This reign of crime, for which the party then in power in Washington was responsible, has proved the greatest curse that could have been brought upon the negroes and at the same time has brought a fearful curse upon the whites. You cannot undo in even 30 or 40 years the evils of 10 or 15 years of such lawlessness and indescribable debauchery as the bad white men from the North and West brought about in this section when they flocked to the South after the war in order to ride into power on the backs of the negroes. Many splendid men from the North and West came here, but they were not of the political "carpet bag" element. While all of this was going on in the South, the Western States were being developed by the combined financial powers of Europe and the East, and this very reign of lawlessness in the South produced by Northern and Western men drove from the South hundreds of thousands of native white people who believed that Anglo-Saxon civilization could never again be restored in the South.

I am in receipt of a letter from Mr. A. C. Burnett of Cadiz Ky., which he encloses your letter of December 20, in which you state that if the farm that Mr. Burnett is advertising for sale were located in Iowa, it would be worth \$200,000 instead of \$65,000, the price at which it is offered in Kentucky. The reasons for these conditions should be understood. You cannot possibly wreck and ruin a country, as the South was wrecked and ruined, destroy its entire financial power, leave it in desperate poverty, disorganize its labor system from one that had existed for a century and change the former laborers largely into a drunken mass of turbulent people, unwilling in those days to work because they were made by swindlers to believe that the National Government was going to give to everyone of them 40 acres and a mule, and expect that these conditions can be overcome in a short time.

Iowa, to which you constantly refer, started its development without a single adverse condition. It had a virgin soil. Population poured into that State, moved thereto by the tremendous work of railroads and financial interests to carry people from the East and South and from Europe to the West. The conditions were so absolutely unlike that I am sure if you are a fair minded man, willing to know the truth, you fully recognize that it is absolutely unfair and unjust from every point of view to contrast the progress of Iowa with the progress of the South to the disadvantage of the latter.

In your State you had a virgin country, with rich soil, with vast prairies that needed but to be tickled with the plow to laugh with abundant crops of grain, and you had

the incoming of hundreds of thousands of active, energetic people, unhampered by any of the adverse conditions during the reign of terror known as "the Reconstruction period," which in itself was a far greater curse and a far greater injury to the South than the actual war. To compare the work of the South in rebuilding its wrecked fortunes and re-establishing law and order with Iowa to the disadvantage of the former and the advantage of Iowa, would be as far from just as to compare the work of an invalid struggling against many diseases with the work of a man who had never known ill-health and was full of vigor and vitality. It takes the invalid a longer time to overcome the effect of disease and to put himself in a position to do business along side of the active man of abounding health. Your comparison between the South and Iowa is as unfair as would be this comparison between the invalid and the man of health.

While the railroads and financial forces of the East and Europe were moving Heaven and earth to carry population to the West, the railroads of the South were at that time so unwisely managed that for the sake of cash which might be received from passenger traffic, and which they so badly needed, they were doing all in their power to induce people to leave the South and go West. As an outcome of this work on the part of the railroads, the Western roads trying to get population there, the Southern roads trying to get population to leave here, added to the hopeless business conditions which prevailed throughout the South for many years following reconstruction, the Central South from Virginia to the Mississippi was drained of more than 5,000,000 white people between 1865 and 1900. The South has thus been giving of its best life blood to the development of other regions and its own impoverishment. Necessarily there is, therefore, a shortage of population in the South to utilize the vast opportunities in this section. Take, for instance, the State of Florida, from which I am now writing, and you will find an area about seven times as large as the area of Massachusetts; but Florida's population is only about one-third of that of Massachusetts. There are, therefore, inevitably great stretches of uncultivated land in Florida because the people are not here to utilize this land. But while Iowa is actually decreasing in population, Florida is growing more rapidly in population than any other State east of the Pacific coast.

Iowa is the only State in the Union which between 1900 and 1915 showed a decrease in population. The census figures between 1900 and 1910 showed a small decrease and this continued, according to official reports of the Government, into 1915. Notwithstanding the fact that during the 15 years from 1900 to 1915 the population of the country increased over 25,000,000, and every other State in the Union made a substantial gain, Iowa showed a loss. The States of the South, which you are so vigorously criticizing, showed a large increase in population between 1900 and 1915. Alabama, for instance, made an increase of nearly 500,000; Arkansas, 400,000; Florida, 350,000; Georgia, 600,000; Kentucky, 230,000; Louisiana, 420,000; Mississippi, 470,000; North Carolina, nearly 500,000; South Carolina, 260,000; and other Southern States in proportion. Notwithstanding your suggestion that population is keeping away from the South this section made these substantial gains while Iowa made an actual decrease. The total population of Iowa in 1915 was 2,221,000 against 2,231,000 fifteen years before.

Extraordinary Position of Southeast Today in the Economic Structure of the Nation

[In connection with the foregoing replies to Mr. Fullerton, the following extracts from an article in Financial America, by Mr. Kirtland A. Wilson, the editor, will be of general interest and should serve to enlighten Mr. Fullerton and any others who have been laboring under similar misunderstanding of the South.—Editor Manufacturers Record.]

America's Great Southeast is rapidly rising today to an extraordinary position in the economic structure of the nation. Its attention diverted and distracted by the war and all the activities which contribute to the prosecution of war, a large part of the public is unaware of a mighty transformation which is being wrought in the character and industry of the Southeastern States; unaware of the measure of prosperity the Southeast has attained since its heroic emergence from the conditions induced by the outbreak of the conflict in Europe; unaware, too, of the increasing indications that, with the coming of peace, the Southeast is sure to rise to a height of prosperity likely to outstrip any other section of the country whose chief industry is the cultivation of the soil.

Peculiarly remote from the war because the manufacture of munitions has not become an industry of the Southeast, that vast section is today building up its natural industries of peace in a way which means much for the present but immeasurably more for the future. What the war means was poignantly impressed upon that section when cotton values crashed with the diver-

sion of all Europe from its normal undertakings to the destructive activities of conflict; but, if war has any blessings, it can be said, and without extravagance, that it has stimulated the Southeast, after a brief period of demoralization, acute though it was, to the practice of an intelligence of energy and industry which has placed within its hands a permanent and increasing prosperity.

Elsewhere in the United States, abnormal industry may be bringing a temporary tide of unusual wealth, but the Southeast is steadily and quite generally building and fortifying, with its eyes on the coming of peace, a foundation from which no dislodgement will be possible. Already, prosperity has spread over the Southeast, a prosperity which still recognizes cotton as its chief staple of commerce but has made itself sensibly less dependent upon that commodity.

What, then, will be the power and strength of that region when the activities of peace are again resumed in this country and throughout the world and the ships of all seas traffic again in the ports of the South?

In the Capital City Club, at Atlanta, there sat at dinner a few nights since, as the guests of R. F. Mad-

dex, president of the Atlanta National Bank, several score representatives of banking and brokerage houses of the North, from as far east as Boston and as far west as Chicago and Indianapolis. They had been making a tour of the Southeast, under the leadership of the Guaranty Trust Co. and the National City Co., both of New York, and through the hospitality of the Seaboard Air Line Railway Co. Present also on this occasion, as throughout the trip, were the executives and operating officials of that railroad system which had been the host of the visitors. Judge George Hillyer, the eighty-two-year-old member of the Railroad Commission of Georgia, was speaking.

"I am here," said Judge Hillyer, "as a witness of the growth of the South through the brief span of a single human life. I can look back to the time within my own experience when Georgia possessed not a foot of railroad track. I saw the first railroad engine which turned a wheel in this State. I have seen, as a Georgian and a Confederate soldier, the devastation wrought by the war between the States and the march of Sherman to the sea. Today, after your tour through the South, you men carry in your minds a picture which none, a few decades ago, would have believed could have become a realization; today, after the space of but half a century, you see a vigorous and prosperous South, a loyal and mighty pillar of the Union and a builder and confirmer of national weal."

It is unnecessary to describe the response of applause which greeted Judge Hillyer's words to indicate their aptness as well as their eloquence. Easy it is to generalize through the use of the term, the "New South," but the term is inadequate. It fails to reveal the forces which have led to the condition which is found today. The history of the development of that region is an epic of the conquest of mind and heart and muscle over a complexity of problems of almost every economic kind.

First and foremost in this development is the fact, of course, that behind it have been men of vision and energy. The North has had no monopoly of this class of men. It is doubtful if any other section of the country possesses proportionately today in quantity or quality, men of purposefulness and patriotism as the Great Southeast possesses them. Mr. Lewis Franklin, vice-president of the Guaranty Trust Co. of New York, in a brief speech made at the same event in which Judge Hillyer participated, expressed the sentiment of the group of visitors when he said that the business men of the North, while long since realizing the opportunities of the Southeast in lines of great economic advancement, had been possessed of no adequate conception of the ability of the human forces of that region to seize those opportunities; but that now, having become personally acquainted with the men of the Southeast, it was clear that this view had been one of narrow vision. Eyes and minds had been opened to the facts.

This unquestionable and significant combination of opportunity and intelligence was the great fact which these visitors to the Southeast carried with them when they returned to the North.

The pride of the citizens of the Southeast in their region and their confidence in its future is expressed, among numerous ways, in the modernization of their communities and in the supplementing of rail communication by the rapid extension of good roads. And good roads construction in the Southeast has so improved rural conditions that the greatest increases in values of lands often have taken place in sections most remote from towns. Public utility service of all kinds is becoming the rule in the smaller communities, as already established in the larger, according to their respective needs. Civic and commercial organizations of great efficiency, in both large and small communities, are doing their part in the thorough vitalization of the whole.

It is, of course, in the greater intelligence manifested in the cultivation of the soil that one finds a chief reason for the present extraordinary position of the Southeast. Methods of cultivation, intensification, diversification, are multiplying in dollars and cents the wealth of that region. Of incalculable benefit, too, is the work being done by the railroads in assisting farmers and in bringing in new families to turn idle acres into productivity. Many of the new residents are taking up cattle-raising, which promises to become one of the chief industries. The time is probably not far distant when the Southeast will be able to supply its

own needs in this direction. Thousands upon thousands of acres, easy of cultivation, capable of producing three and even four crops a year—indeed of producing both a marketable crop and of providing grazing-ground for cattle, are awaiting and inviting husbandmen.

While there is an increasing number of men and families going into the Southeast for permanent residence, and while the admixture of these is proving an important factor in the development of that region, it cannot be said that capital has moved at all freely, heretofore, into the Southeast from elsewhere. The result is that the Southeast's development has been in large part a matter of native enterprise and hence of a peculiarly substantial kind. In this development of late years the adoption of prohibition, as a State proposition or locally, has unquestionably been a useful factor.

Given a section of the country which, in territory, is more than 10% of the whole; which is rapidly growing in population, in productivity, in transportation facilities; which has certain resources unfound or inexpensive elsewhere; which has fine ports and strategic advantages for ocean commerce; which has well-placed interior cities and distribution points; which has a qualified leadership in its activities and a rapidly increasing intelligence and responsibility throughout its citizenry, and yet—with all these—still offers great expanses of land for cultivation and a very great measure of it easily cultivatable, it is readily seen that such a section holds a promise for itself and the nation which cannot be reckoned in ordinary terms of value of measurement.

Such, it seems to those who have had recent opportunity of personal observation, is the Great Southeast of today.

INDUSTRIAL ACTIVITIES OF THE SOUTH IN 1916.

Substantial Increase Shown in Number of New Undertakings Reported by Manufacturers Record—Total Number of Construction Items 57,416.

Continuing its progress of past years, the South is moving onward along important lines of development. In evidence of this, during the year just closed the MANUFACTURERS RECORD and the Daily Bulletin have furnished their readers a total of 57,416 concisely-written statements relative to varied and general Southern activities, comprising developments along industrial, financial, railroad and building lines.

Upon receipt, these statements, gathered from many sources, have been promptly published in the Daily Bulletin, then combined in the Construction Department of the weekly publication of the MANUFACTURERS RECORD.

The number of items exceeds that published during 1915 by about 2000, and the statements relate to the same general departments of industries, buildings and financial operations. They include 5149 items regarding new securities, 1030 concerning corporations and 1074 relating to railway and street railway construction. The building of new and improvements to existing roads and streets is described in 3328 items; 1230 are devoted to water-works, and 947 to sewer construction; iron and steel plants, 112; miscellaneous construction, including levees, wharves, piers, docks, etc., 473; under miscellaneous factories and foundry and machine plants headings 2627 statements appear, these covering improvements, enlargements or new establishments of plants of varied and comprehensive interests, from great shipbuilding concerns, boiler-making, structural steel manufacture, castings and large and small machinery, to the manufacturing of overalls for the workman to wear while he toils in the other plants.

Textile mill operations (elsewhere in this issue elaborated in a special summary) have been mentioned in 645 items; 859 were devoted to bridges, culverts and viaduct construction; 449 to coal mines and coke ovens; 1309 given to electric and hydro-electric plants; 1510 to gas and oil enterprises; 799 to mining; flour, feed and meal mills, 275 items; coal mines and coke ovens, 449 items, with the many others, such as land development and irrigation, ice and fertilizer factories, cottonseed-oil mills, cotton compresses and gins, motor cars and garages, railway shops, various woodworking fac-

ories and other industries mentioned under their special headings in our industrial development columns.

The buildings division of this department has this year published the large number of 6125 items on plans for and construction of dwellings; also 3287 school items, 2781 on stores, 1547 on churches, 952 bank and office building items and 1234 relative to apartment-houses, with a large list of statements concerning other structures, including warehouses, hotels, Government and State and municipal and county buildings.

Our Machinery, Proposals and Supplies Wanted department has contained a total of 6779 specific inquiries relative to contracts, machinery, building materials, supplies and equipment for all kinds of manufacturing, as also requests for data and prices on many other common and some unusual commodities. In the main, these requests came from the Southern States, some from elsewhere in our own country, while quite a number, more than 300, were from subscribers and readers in foreign lands, this foreign list, of wide scope, including Argentina, Australia, Brazil, Canada, China, Colombia, Costa Rica, Cuba, Curacao, Crete, Denmark, Dutch Guiana, Egypt, England, Ecuador, France, Greece, Guadeloupe, Haiti, Hawaii, Holland, Jamaica, Japan, Malta, Martinique, Maurice, Mexico, Morocco, Norway, New Zealand, Panama, Paraguay, Peru, Philippine Islands, Porto Rico, Portugal, Russia, Santo Domingo, Scotland, South Africa, Spain, Switzerland, Turkey, Uruguay, etc. Not a week passes in which correspondence does not bring to the MANUFACTURERS RECORD some of these requests from other lands for data and information concerning resources, products and manufactures of this country.

As mentioned previously, these reports are gathered with much care from various sources. To obtain and verify them necessitates the use of many thousands of letters and telegrams and the services of a large force of careful workers. The result, however, is a motion picture with a host of rigidly-censored films suited to an audience of capitalists, manufacturers, architects, engineers, contractors, investors and any others who are interested in the possibilities and established developments of the South.

Under their appropriate headings, the following table gives the items for the month of December and the totals for the year. Items for the preceding 11 months were previously detailed in monthly statements.

A YEAR'S CONSTRUCTION ITEMS.

	Decem-ber.	Totals for 1916.
Industrial and Developmental.		
Bridges, Culverts, Viaducts.....	40	539
Canning and Packing Plants.....	33	261
Clayworking Plants.....	9	137
Coal Mines and Coke Ovens.....	77	449
Concrete and Cement Plants.....	3	52
Cotton Compresses and Gins.....	14	253
Cottonseed-oil Mills.....	2	115
Drainage Systems.....	24	215
Electric Plants.....	53	1,301
Fertilizer Factories.....	6	73
Flour, Feed and Meal Mills.....	19	275
Foundry and Machine Plants.....	23	429
Gas and Oil Enterprises.....	134	1,510
Hydro-electric Plants.....	4	108
Ice and Cold-storage Plants.....	44	476
Iron and Steel Plants.....	7	112
Irrigation Systems.....	.....	25
Land Developments.....	28	465
Lumber Manufacturing.....	72	790
Metal-working Plants.....	5	97
Mining.....	81	799
Miscellaneous Construction.....	31	473
Miscellaneous Enterprises.....	78	1,123
Miscellaneous Factories.....	155	2,198
Motor Cars, Garages, Tires, etc.....	96	981
Railway Shops, Terminals, Roundhouses, etc.....	3	95
Road and Street Work.....	155	3,328
Sewer Construction.....	56	947
Telephone Systems.....	5	183
Textile Mills.....	42	645
Water-works.....	65	1,230
Woodworking Plants.....	44	481
Buildings.		
Apartment-houses.....	69	1,234
Association and Fraternal.....	22	470
Bank and Office.....	50	652
Churches.....	84	1,547
City and County.....	42	652
Courthouses.....	12	247
Dwellings.....	376	6,125
Government and State.....	29	240
Hospitals, Sanitariums, etc.....	24	429
Hotels.....	39	672
Miscellaneous.....	40	679
Railway Stations, Sheds, etc.....	29	361
Schools.....	161	3,287
Stores.....	140	2,781
Theaters.....	22	299
Warehouses.....	52	554
Railroad Construction.		
Railways.....	77	985
Street Railways.....	3	89
Financial.		
Corporations.....	81	1,080
New Securities.....	302	5,149
Fire Damage, etc.....	3,062	48,177
Machinery, Proposals and Supplies Wanted.....	453	6,779
Total.....	3,746	57,416

Canton (Ga.) Brown Ore Deposit Possible Basis for Great Mining Operation

[Special Correspondence Manufacturers Record.]

Birmingham, Ala., December 30.

For many years there has been known to exist in the State of Georgia a large body of brown ore commonly referred to as the "Chattahoochee Iron Ore Lead," located in Cherokee county, near the town of Canton, on the Blue Ridge branch of the Louisville & Nashville Railroad. County maps have been in existence for years showing bold references of this lead of ore, and many individual reports have been made as to the extent and character of deposit, based on practically insignificant prospecting work, yet of sufficient nature, together with showings of outcroppings, to give this deposit of ore a marked unique standing among the known deposits of central Southern ores, both in extent of deposit, character of ore and surrounding material.

For many years this deposit of ore was not available for sale by reason of certain heir complications, making it impossible to deliver a flawless deed. This obstacle was removed in 1909, and a sale was made to R. G. Peters interests of Manistee, Mich. However, the property was never opened or operated by the Peters interests, and at the present time the Michigan Trust Co. of Grand Rapids, Mich., is acting as trustee for the R. G. Peters estate. In line with the trust company's policy of intelligently and profitably winding up the affairs of the estate, it has expended a large sum of money in order to demonstrate, beyond a reasonable doubt, the extent and quality of the Canton brown ore. For a distance of seven miles, or extending throughout 14 lots of 160 acres each, there are several bold and distinct veins or strata of the ore paralleling each other and dipping vertically, the width varying from 20 to 250 feet, and undisturbed as to extent and uniform quality to an average depth of at least 90 to 100 feet—possibly more. Following this lead of ore there has been put down at an average distance of about 400 feet apart 39 churn drill holes, ranging in depth from 20 to 50 feet; 19 3½-foot diameter wells ranging 20 feet in depth to natural water level; 3 tunnels 5 feet wide, 6 feet high and 60 to 175 feet long, with 60 to 75-foot cross sections.

This prospecting work has been done in the above persistent manner across five sections, and all prospecting work reveals exceptionally rich deposits of stratified and wash ore. In addition to this new work done by the trust company, the lead is being followed over the remaining 11 sections by placing wells 1200 to 1300 feet apart, simply to prove the continuity of the lead. There are 10 to 15 bold outcroppings throughout the entire eight miles, as well as quite a few old shafts and facings which show conclusively the continuity of the lead.

In making a report on the geological formation of this ore deposit in 1909 Dr. Wm. B. Phillips, former State Geologist of Texas, has this to say: "The rocks are micaceous schists interbedded with quartzite and quartz veins. They are apparently of the same age as the Talladega schists in Alabama, and are either pre-Cambrian or highly altered carboniferous. * * * These rocks cover a large area in Georgia and Alabama, and are known to carry brown ores in other localities. Their course is east-west and northeast-southwest, and dip at angles varying from 30 to 80 degrees. In places these rock carry great seams of pyrite, together with ores of lead, copper and zinc. * * * The continuity of these rocks over a very extensive area is well known. While they are subject to some local faults and dislocations, they are remarkably free from such disturbances on the whole. The ore bodies they contain are likely to be permanent, without serious faulting."

Commenting on the ore bodies, Dr. Phillips says: "In so far as concerns the chemical composition of the ores, they do not differ markedly from brown ores of the usual type. They may be depended on to yield from 45 per cent. to 52 per cent. of iron after washing, with variable amounts of manganese. The phosphorus content is somewhat lower than is usual in such ores, running from .25 per cent. to .35 per cent.; in some cases even lower. * * * A remarkable feature of these ores is that the clays with which they are mixed are easily disintegrated in water and removed in the washer without 'balling up.'"

Concluding, Dr. Phillips says: "In summing up this matter I wish to say that during my experience of nearly 25 years I have not seen a brown ore property of greater promise than this. It is exceptional in the location, in the quality of the ore and the cheapness with which it can be mined."

To anyone who is familiar with the prospecting or operation of brown ore deposits, with their usual irregular and undependable pocket formation, the Canton brown ores at once become an interesting study. Unlike any other deposit in the South known to the writer, this is a lead of brown ore that can be traced in regular form for many miles by outcrops and surface indications; and with the prospecting work that has been done on the property the cause for reasonable doubt as to the existence of an extensive lead of brown ore is dissipated. The tonnage immediately in sight is sufficient to warrant the development of the property to the extent of becoming the largest independent merchant mine in the South; and by reason of its location would be in position to serve the Alabama, Tennessee, East Kentucky and Southwest Virginia furnaces with large quantities of rich metallic iron ore which is easily reducible in the furnace.

It is understood that at the present time negotiations are pending for the sale of the property, which in all probability will result in the establishment at this point of one of the largest mine operations in the South.

Y. A. DYER.

FOR A SHIP CANAL THROUGH THE HEART OF FLORIDA.

Plan Proposed for Waterway Costing \$10,000,- 000 to Connect Gulf of Mexico and Atlantic Ocean.

A movement has been started by P. A. Vans Agnew of Jacksonville, Fla., for the construction of a ship canal through the heart of Florida that will afford an inland, sheltered waterway connecting the Gulf of Mexico with the Atlantic Ocean. To further this project, it is planned to call a meeting of representative interests from the 15 counties through which the waterway would pass. Bearing upon this project, Mr. Vans Agnew writes the MANUFACTURERS RECORD as follows: "For many years the attention of the Federal Government has been repeatedly locally called to the necessity of furnishing an inland waterway canal for light draft vessels along the East Coast of Florida and down the St. Johns River, particularly south of Sanford. The St. Johns route contemplates the cutting of an ocean canal from the upper waters of the St. Johns River across to the Indian River.

"Both propositions have been reported upon by the War Department, but no affirmative action has resulted. It is generally understood that the East Coast route would have no strategic value because of its being within range of modern gunfire, but the St. Johns route would unquestionably have some strategic value.

"The present proposal contemplates the construction of both routes, and possibly the connection of the Upper St. Johns route with the upper lakes of the Kissimmee River, down the Kissimmee River to Lake Okeechobee, and then across the State in both directions, one east to the Indian River, possibly utilizing one of the Florida State drainage canals, and the other west to the Gulf of Mexico, down the Caloosahatchee River. The possibility of including the Ocklawaha River is also being discussed.

"Such a district would comprise one-third or more of the State of Florida.

"The proposal is to apply to the Legislature at its forthcoming session for the passage of a bill creating the district with the full powers to carry the work forward.

"A vital feature of the proposition is that the district would confidently expect Federal aid, based upon the old adage, 'God helps those who help themselves,' as shown in the recently enacted Federal Good Roads act.

"A few strictly local similar projects have been un-

dertaken, and are now being operated in other States, but these have all hitherto been confined to the improvement of harbors. There are at least three of these districts in Texas and two in Oregon. In each case the Federal Government extended substantial assistance.

"The improvement of the Port of Jacksonville was initiated many years ago by a somewhat similar bill, under which the City of Jacksonville taxed itself to start the improvement, and this action immediately resulted in substantial aid from the War Department.

"The theory of such a navigation district is similar to that of special tax road districts and school districts and drainage districts, all of which are now practically established under the laws of Florida. The only, practical difference between a navigation district and a road district is the building of water roads instead of land roads.

"It is possible that the navigation district plan may prove to be a practical solution of the present 'pork barrel' problem, which is now being so severely and generally attacked throughout the country, and the plan may spread further.

"Local interest is being aroused in the proposition, and the Sanford Board of Trade is considering the calling of a meeting early in February to discuss the matter, and Dr. Isham Randolph of Chicago has accepted an invitation to address the meeting."

POTTERY INDUSTRY ESPECIALLY AC- TIVE IN WEST VIRGINIA.

New Construction and Extensions Mostly Con- fined to States of South—Great Demand for Southern Clays.

Chester, W. Va., December 28—[Special.]—While increased activity prevailed throughout the domestic pottery business during 1917, yet all new construction and extensions were confined mostly to the West Virginia territory. After practical idleness of over a year, the former plant of the Consolidated Manufacturing Co. of that place and its nine kilns are in full operation. An additional kiln was built by the Warwick China Co. of Wheeling, W. Va., while capacity has been increased at the plant of the Wylie China Co. at Huntington, W. Va.

The Southern Potteries Co. has just placed a new seven-kiln plant in operation at Erwin, Tenn., and a new seven-kiln plant is now contemplated at Sistersville, W. Va.

In no district north of the Ohio River has the boom in the domestic pottery trade been as aggressive as in West Virginia. There is a tendency among pottery manufacturers north of the Ohio River to get into the West Virginia territory on account of the ability to secure cheaper fuel coal and gas. It is this reason that prompted the formation of the Clay Casting Co. at New Cumberland, W. Va., to take over and place in operation the idle seven-kiln pottery formerly operated by the Chelsea Pottery Co.

It is also asserted in the pottery district that an effort will be made to locate a pottery at Morgantown, W. Va., during the new year. This proposition has been under consideration for several months.

Southern clays are in greater demand than ever, and pottery manufacturers find that a number of grades are equal in quality to the imported English clays, which have been steadily advanced in prices.

Everything points to a continuation of the present unusual conditions in the pottery industry for the first half of 1917, if not throughout the year.

If the potteries were guaranteed an adequate force of workmen at all times, and an unlimited supply of fuel and raw materials, they could come close to maintaining a reasonable schedule of shipping to meet even the present abnormal demand. But it is hardly expected now that the nation-wide shortage of men which so seriously cripples all mills and factories—the potteries no more than others—will be relieved before the end of the war. Wages in the potteries were recently advanced by voluntary action of the manufacturers to the highest average level of any American industry. This was done with the hope that it would fill up the gaps among the working crews, but in that respect it was a disappointment. The men are not to be had at any price. This means that until normal conditions are restored production will to some extent be curtailed and shipments correspondingly slow.

BETHLEHEM'S PLANS FOR VAST EXTENSIONS.

Outline of Expenditures on Baltimore Plants. Contracts Let for Furnaces, Coke Ovens, Etc.

South Bethlehem, Pa., December 29.—[Special.]—The Bethlehem Steel Corporation has under way at present a program for additions and extensions which involve the expenditure of something over \$100,000,000 during the next two or three years. This expenditure will be made to a very large degree at the various steel plants of the company, but also includes a considerable program at the company's coal and ore mines and at its shipyards.

At the Maryland steel plant at Sparrows Point, Md., very substantial acreage of land adjoining the present plant has been purchased and a number of dwellings for workmen have been completed or will be completed in the next few months. In connection with the town a new sewerage system is being installed by the company. Four 500-ton blast furnaces costing \$10,000,000 have been contracted for, and all the auxiliaries, including new casting machine, gas washers, etc., are under way. To supply coke for these furnaces four batteries of 60 ovens each of Koppers coke ovens have been contracted for, complete with by-product plant. These ovens will be 13½ tons capacity. In connection with these coke ovens an elaborate system of coal handling, unloading, crushing, mixing, etc., has been contracted for and will be erected in the next year or 18 months.

The ore dock serving the blast-furnace plant will be extended, and additional bridge and unloaders purchased. The 30-foot channel leading from the main Baltimore channel will be deepened to 35 feet to enable a 17,000-ton ore boat to get all the way up to the ore dock.

Thirteen Bethlehem gas-driven blowing engines will be installed for blowing the blast furnaces. The engines will be 47x84x60 inches. In this same powerhouse will be installed eight 47x60-inch Bethlehem twin tandem gas engines driving 4000 K. W. generators. This complete powerhouse will be most modern in every respect. A new duplex plant will be built consisting of four 30-ton converters and four 200-ton tilting furnaces, which furnaces will be equipped with waste-heat boilers. Two 1300-ton and one 250-ton hot-metal mixers will be installed in connection with this open-hearth plant.

The following mills will be added: Forty-inch bloomer, with 24-inch and 18-inch billet mill for sheet bars and billets; 36-inch slabbing mill will be ordered to slab for the three (3) plate mills, which will consist of 110-inch plate mill, 60-inch universal reversing plate mill and one 166-inch plate mill. There will also be installed three merchant-bar and rod mills of semi-continuous type. All the above mills will be motor driven.

The first twelve tinplate mills are at present well under way and 12 more mills will be added as soon as practicable, making 24 mills in all. The installation of this very considerable equipment, of course, requires considerable additions to the company's water stations; transportation department and other general departments. Included in the above is a considerable extension to the iron foundry which will double present capacity.

At the Maryland Shipbuilding Plant at Sparrows Point, Md., a considerable sum will be spent. A new machine shop, 175x420 feet, including complete equipment of new machine tools, has just been put in service, as well as the new steel and brick fabricating shop, with cranes, hydraulic flanging machines, etc. A blacksmith shop, 75x325 feet, is just being started for these yards. Extension will also be made to the boiler, tin and pipe shops, and a new copper shop will be built. At these yards a new 20,000-ton floating drydock to accommodate vessels up to 600 feet in length by 80 feet beam is now well under way. Necessary dredging and concrete bulkhead has been contracted for. In these yards are being built four 11,000-ton ore boats and one 17,000-ton ore boat to transport the company's ores from the Chilean and Cuban mines. All of these boats are well under way.

The Bethlehem Chile Iron Mines Co. will expend \$8,000,000 in the next year to bring the output of these mines up to one and a half million tons of ore per year. At the Cuban mines (Mayard division) it is planned to

double the present capacity, building up the output to one million tons of ore per year. At the Cuban mines (Daquiri division) construction work in progress includes a 30,000-ton ore-storage plant and cantilever bridge.

At the Penn-Mary Coal Co. mines at Heilwood, Pa., extensions and improvements will be made to double the present output.

Safe Deposit & Trust Co.'s Fiftieth Anniversary

In observing its fiftieth anniversary, the Safe Deposit & Trust Co. of Baltimore, which was the first safe deposit company and first corporate fiduciary in Maryland, notes some important facts concerning its origin and progress that are historic. As the Safe Deposit Company it began business in 1867, and nine years later it changed its name to Safe Deposit & Trust Co. and undertook business as a fiduciary. Before 1867 owners of securities and other valuables either kept them in safes in their homes or placed them in the vaults of banks with which they had business relations and the company was the first to provide inexpensive and secure facilities independently of other business. Before 1876 individuals were always named as executors, administrators, etc., and in some instances results were unsatisfactory to both those in charge of estates and the beneficiaries. The company then became the first corporation to offer an opportunity to have trained and experienced men appointed to care for estates. Since the beginning of this branch of its business it has settled more than 1800 estates, and at present is either managing or settling 1600 estates of an aggregate face value of more than \$88,000,000. The safe deposit vaults are spacious and finely equipped, and the number of box renters is remarkably large. The assets of the company total \$16,333,003. H. Walters is chairman of the board; J. J. Nelligan, president; J. W. Marshall, vice-president; A. P. Spamer, second vice-president; G. B. Gammie, treasurer; C. R. Tucker, assistant treasurer; H. H. M. Lee, secretary; A. C. Gibson, J. B. Kirby and W. R. Hubner, assistant secretaries; G. R. Tudor, cashier, and A. P. Strobel, real estate officer.

Tampico Oil Report for October and November

Declared exports of crude oil and petroleum products from the Tampico district to the United States in October amounted to 2,155,891 barrels and in November to 2,087,155 barrels, according to the report of Consul Claude I. Dadson, Tampico, Mexico, under date of December 11. The movement from Tampico was 1,573,080 barrels in October and 1,581,150 barrels in November; from Tuxpam, 582,811 barrels and 506,005 barrels, respectively.

Shipments to points other than the United States in October were reported as 196,745 barrels from Tampico and 494,104 from Tuxpam; in November, 308,854 barrels from Tampico and 628,808 from Tuxpam. The total exports, therefore, reached 2,846,738 barrels in October and 3,024,817 barrels in November.

Tampico shipments included refined products as follows:

Products.	October. Barrels.	November. Barrels.
Distillate	68,000	84,000
Reduced crude.....	224,310	409,730
Fuel oil.....	79,841	230,116
Kerosene .....	.....	28,560

As heretofore, Tuxpam shipments include only crude oil, the topping plants at that port not being ready for operation.

Farm Loan Banks to Be Established as Soon as Practicable.

The Farm Loan Board at Washington has announced the districts of the 12 Federal Farm Loan Banks of which the South, including Missouri, will have six, as follows: District No. 2, bank at Baltimore, comprises Pennsylvania, Delaware, Maryland, District of Columbia, Virginia and West Virginia. District No. 3, bank at Columbia, S. C., comprises North Carolina, South Carolina, Georgia and Florida. District No. 4, bank at Louisville, Ky., comprises Ohio, Indiana, Kentucky and Tennessee. District No. 5, bank at New

Orleans, comprises Alabama, Mississippi and Louisiana. District No. 6, bank at St. Louis, comprises Illinois, Missouri and Arkansas. District No. 10, bank at Houston, comprises Texas alone.

The other banks are located thus: District 1, Springfield, Mass., for the New England States, New York and New Jersey. District No. 7, St. Paul, Minn., for Michigan, Wisconsin, Minnesota and North Dakota. District No. 8, Omaha, Neb., for Iowa, Nebraska, South Dakota and Wyoming. District No. 9, Wichita, Kans., for Oklahoma, Kansas, Colorado and New Mexico. District No. 11, Berkeley, Cal., for California, Nevada, Utah and Arizona. District No. 12, Spokane, Wash., for Washington, Oregon, Montana and Idaho.

The banks are to be established as soon as practicable, and each will have \$750,000 capital. They will not engage in general banking business, but will concentrate upon loaning money for the development of the agricultural interests at moderate rates of interest. The issue of farm loan bonds is to be a feature of the system, and loans are not to be made for more than one-half of land values.

Savings Banks Reports.

The Savings Bank of Baltimore in its annual report just issued shows total assets of \$38,981,038, consisting of bonds and stocks owned to the amount of \$34,870,276; loans on mortgages, \$2,545,658, and cash on hand and in banks, \$1,207,545. The balance is represented by real estate, including the bank building. The operations of the bank during the past year display gratifying progress. Funds on hand at the end of 1916 were \$38,981,038, an increase of \$1,644,277 since the beginning of the year. There was paid to the depositors during the twelvemonth, including interest, a total of \$7,801,657, while the amount received from them was \$7,908,403. Interest and dividends received from investments totaled \$1,823,236. The amount due depositors is now \$35,862,349, guarantee fund \$2,200,000 and undivided surplus, which is chargeable with nine months' accrued interest on deposits payable April 1 next, amounts to \$918,689. The number of accounts open is 53,870, an increase of 388 during the year. William H. Conkling is president and Frederick A. Hoffman treasurer.

The annual report of the Central Savings Bank of Baltimore displays assets amounting to \$10,221,899, composed of bonds and stocks owned, \$6,883,043; loans on mortgages, \$2,189,900; loans on collateral, \$380,167; cash on hand and in banks, \$533,525, the balance being real estate, including the bank building, and there is also a small sum for perpetual insurance deposits. The bank's funds have increased and the number of depositors has also grown as compared with this time last year. Funds on hand at the end of 1916 were \$10,221,899, an increase of \$166,816, and the total number of depositors is 20,725, an increase of 107. The amount paid to depositors during the year was \$2,957,299, including interest, and the amount received from depositors was \$2,753,106. There was also received interest and dividends on investments, \$457,483. The amount due depositors, including interest and extra dividends, is \$9,175,060, and the guarantee fund is \$1,046,838. Wilton Snowden is president and J. Wilson Cole treasurer.

\$300,000 Chain Works for Norfolk.

Investigations recently instituted by the American Chain Co. of Bridgeport, Conn., and other cities have resulted in a decision to build works at Norfolk. A six-unit plant costing \$300,000 and employing 300 men will be equipped. Land suitable for a site has been obtained and special machinery costing \$150,000 has been ordered, the equipment to include a testing machine with a capacity of 2,000,000 pounds.

The American Chain Co. is a \$4,000,000 corporation, and it is planning an increase to \$10,000,000.

Votes \$200,000 Bonds for Roads.

An issuance of bonds to the amount of \$200,000 has been voted by Perry county, Mississippi. The proceeds of these bonds are to be expended for the construction of highways, and the county commissioners, New Augusta, are in charge.

1916 GREATEST YEAR IN HISTORY OF MINING.

Outline of Geological Survey's Report Shows Tremendous Production of All American Minerals.

"Never before has so large a draft been made on the natural resources of our country as during the year 1916," comments Secretary Lane on the report just made to him by the Geological Survey, "and never before have the metals been extracted from these ores with less waste or utilized to better advantage in advancing the general prosperity of the country. Even as written in the plain figures of 1916 production the wonderful record of our mines sets forth a degree of national industrial independence only hoped for a few years ago.

"Again copper stands out as the best illustration of how American mines can meet a world demand. The output of nearly 2,000,000,000 pounds of the red metal is double that of 10 years ago, and its value is twice that of the copper produced in 1915. Add to this the facts that in value copper now contends with iron for first place among the metals, and that together the amount of these two metals produced last year had a value of more than \$1,000,000,000, and we have a measure of what this country can contribute in useful metals.

"The output of zinc from domestic ores increased last year 95,000 tons, which makes a new record for that metal, the total value of spelter from United States ore being \$150,000,000. Lead also shows a large increase, the \$75,000,000 output being a gain of more than 50 per cent.

"With all this activity in metal production the coal mines have had to meet a heavy demand, so that the bituminous coal output has now passed the half-billion-ton mark, an increase of 12½ per cent. over the previous year. Coke production increased 30 per cent., and it is gratifying to note that by-product coke made the largest gain, which means a corresponding gain in benzol and other valuable by-products.

"Again the oil wells have given a new record for petroleum yield, the estimate of marketed production of crude petroleum for 1916 being 292,000,000 barrels, or 11,000,000 barrels more than in 1915.

"Another mineral product which furnishes an index of business conditions is cement, the 1916 production of which is estimated to be 5,000,000 barrels in excess of the output of the previous year, while the shipments were even greater, aggregating 94,500,000 barrels, with the outlook reported as good for the new year.

"The reports received from the Survey's Western offices contain most significant mining records. Every Western State shows a large increase in yield of metals, Arizona leading with a gain of \$100,000,000 over last year, while Utah and Montana together report another \$100,000,000 gain. Alaska also had its best year, contributing a total value of more than \$50,000,000 this year, or over 50 per cent. in excess of any previous year.

"These advance statements not only show that 1916 marks a new advance for the mineral industry of the country, but this remarkable increase promises to be approximately 25 per cent. over the 1915 production, so that we may expect the final figures to show a total of \$3,000,000,000."

Large Flow of Gas Struck in Monroe (La.) Field.

A 10,000,000-foot gas well has been drilled in by the Ouachita Oil & Gas Co. in Ouachita parish, 15 miles north of Monroe, La., according to advices from Monroe recently. This is the third well brought in by this company in the Monroe-Bastrop field, and is much the largest. Gas will be piped to Monroe, the service to begin within 60 days, it is announced.

All Iron Records Broken.

The January first estimates of shipments of iron ore from the mines during 1916 are 75,500,000 gross tons, compared to 55,493,100 tons for 1915, according to Ernest F. Burchard of the United States Geological Sur-

vey, Department of the Interior. Not only are these record-breaking figures, but the ore sold for \$178,935,000, an increase of over \$77,000,000 compared with 1915. Ore in stock at the mines approximates 10,486,000 gross tons, compared with 13,748,000 tons in 1915.

Production of pig-iron also made a record in 1916, with a total of over 39,000,000 gross tons, compared with 29,916,213 tons in 1915.

Hydro-Electric Plant Additions.

Contract has been awarded to the Westinghouse Electric & Manufacturing Co. of Pittsburgh for the new machinery required for the Montgomery (Ala.) Light & Water Power Co.'s improvements recently decided upon. Outlining these betterments, Harry D. Frenauff, vice-president and general manager, writes to the MANUFACTURERS RECORD:

"The improvements we contemplate are as follows: The enlargement of two units at the Tallassee hydro-electric plant, from 875 to 1500 kilowatts each; occupation of a transformer-room formerly built but never occupied; construction in North Birmingham of a substation to handle our power load; rebuilding our downtown distribution system, including the rearrangement of feeders."

Another Big Mine for Birmingham District.

An ultimate investment of \$300,000 is planned for a new mine which the Yolande Coal & Coke Co. of Birmingham will develop at Yolande, Ala. Diamond drills are now boring for the opening, and \$100,000 will be invested for the initial purchases of engines, boilers, tripplers, washers and other necessary machinery. Further expenditures will amount to \$200,000. This new mine is to have an ultimate daily capacity of 3500 tons of coal shipments to begin in about six months.

This will be the seventh Yolande mine, and it will be on the Black Creek seam. The company's other mines (six on its 15,000 acres of Tuscaloosa county land) are on the Blue Creek and Jagger coal seams.

To Drain 280,000 Acres in Arkansas.

Several million dollars will be invested for a drainage system to reclaim 280,000 acres of land in Poinsett, Craighead and Mississippi counties, Arkansas. This property is comprised in the Keystone Drainage District, whose commissioners have offices at Blytheville, Ark. The Morgan Engineering Co. of Memphis is preparing the plans for the 300 miles of canals, ditches, levees, etc., which will be required. The work will include removing 30,000,000 cubic yards of dirt for the canals and levees, for constructing concrete syphon one-quarter of a mile long, etc. Plans include utilizing the existing channels of Little River and Right Hand Chute.

Big Order for Chemicals.

Among recent contracts received by the Federal Dye-stuff & Chemical Corporation of New York is an order for 3,000,000 pounds of chloro-benzol, which is one of the intermediates used in manufacturing dyes. This chemical will be manufactured in the company's plant at Kingsport, Tenn., and is to be exported within the next six months. It is stated that there is nearly \$500,000 profit in this one contract. The company's plans for doubling its output were recently announced, and it is understood that the plan for manufacturing gunpowder has been abandoned because of the increasing demand for the Federal chemicals.

Packing Plant for Lexington, Ky.

One hundred hogs and 50 head of cattle will be the daily capacity of a meat killing and packing plant which the Dairy Farm Packing Co. will establish at Lexington, Ky.

This is a new organization capitalized at \$25,000, its managers being Thomas P. Neet of Versailles and C. A. Claus of Louisville. They have purchased a farm and packing-house, which will be improved for the new enterprise, the new installations to include a cold-storage plant.

HOMES FOR WAGE-EARNERS ALONG IDEAL LINES.

E. H. Bouton and Associates to Build Residential Town for Employees of Bethlehem Steel Corporation's Sparrows Point Plants.

An investment of from \$4,500,000 to \$5,000,000 is contemplated in the development at St. Helena, near Baltimore, of a residential city for the employees of the Bethlehem Steel Corporation's plants at Sparrows Point. The land is located midway between Baltimore and Sparrows Point, which is 12 miles distant. The enterprise will be under the direction of E. H. Bouton, president of the Roland Park Company, who, with associates, has secured control of 700 acres of land. The first development unit will be 300 acres, on which several hundred dwellings will be completed by the end of the year. Further plans provide for several thousand dwellings and for a complete utilization of the 700 acres.

The improvements will include curvilinear roads, paved streets, sidewalks, water supply, electric lighting, sanitary sewers, shade trees, playgrounds, recreation centers, athletic fields, etc.

Plans and specifications are now being prepared with a view of beginning construction by April 1. The landscape engineer is Charles Wellford Leavitt of New York.

In this development Mr. Bouton and his associates have the co-operation of the Bethlehem Steel Corporation, and are planning the entire enterprise with ideals similar in kind to those that have governed in Roland Park and Guilford, Baltimore suburbs, known throughout the world. Modifications will be made, of course, in keeping with the requirements of a city of workmen's homes, but there will be an entirely new departure from anything Baltimore has known in the line of homes for wage-earners.

Texas Activities in City Planning Work.

Sherman, Tex., January 1—[Special.]—The Texas Town and City Planning Association will hold its third semi-annual convention in Sherman Friday, February 9.

The program will be largely given over to the discussion of practical problems in connection with sanitation, parks and other problems concerning the physical conditions of the average town or city.

On the program will be Geo. E. Kessler, landscape architect of St. Louis, whose work enabled Dallas to get her \$5,000,000 Union Station, and who is now working on a city plan for Houston.

S. A. Greenley of Winnetka, Ill., and Chas. Saville, director, Department of Health, city of Dallas, will discuss sanitation and the dollar and cent value of health campaigns.

In addition to the talk by Mr. Kessler, methods of interesting the people in city planning will be presented by Geo. B. Dealy, general manager Dallas-Galveston News, and Mr. Ed. H. McCuiston, Mayor of Paris. The care of shade trees and tree planting campaigns will be presented by Miss M. A. Moore of Denton and F. K. McGinnis, city forester of Dallas.

Woman's work in city planning and city development will be presented by Mrs. Fred Fleming, president Texas Federation of Woman's Clubs; Mrs. Florence C. Floore, chairman civic division, Texas Women's Clubs; Mrs. J. L. Lovejoy of McKinney and Mrs. J. L. Young of Mineral Wells.

The American Civic Association and the National Municipal League will also be officially represented.

The Cotton Movement.

In his report of December 29 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during 151 days of the season was 8,850,589 bales, an increase over the same period last year of 1,346,752 bales. The exports were 3,118,728 bales, an increase of 854,527 bales. The takings were, by Northern spinners, 1,500,402 bales, an increase of 92,501 bales; by Southern spinners, 2,348,867 bales, an increase of 479,288 bales.

The Iron, Steel and Metal Trades

TRANSPORTATION CONDITIONS MENACE IRON AND STEEL TRADES.

Curtailment of Shipments and Continuation of War Expected to Result in Still Higher Prices—Buying Again Becomes Active in Pig-Iron and Steel Products.

New York, January 2—[Special.]—The last week of the old year witnessed an almost complete reversal in iron and steel conditions, or what perhaps would be best referred to as a return to conditions as they were prior to the latest peace movement.

The subject of very pertinent interest to the iron and steel trades at present is the transportation problem. This will be the governing factor as to production for several months to come. The curtailment of shipments owing to inadequate transportation facilities, coupled with the now generally accepted fact that the European war will be prolonged for at least another year, is expected to bring about shortly further important price advances of iron and steel products, especially of prompt material. As an illustration of the serious transportation situation facing the iron and steel trades the Carnegie Steel Co., with coke ovens and some transportation resources of its own, shut down 20 of its 57 blast furnaces last week, and an early resumption now seems improbable. Some other prominent interests have fared as badly or worse. If there is any spot coke offered it is at ruinous prices.

Finished steel production is not now a question of contracts, orders, specifications or "pressure from buyers" and will not be for many months to come. It is entirely a question of cars, fuel and men. Car shortages and embargoes combine to reduce shipments of finished products, but thus far the output has not been reduced materially. Many plants, however, are rapidly reaching that point. Heretofore it has been supposed that only the finishing mills not equipped with storage facilities would be affected, there being certain mills that are not so equipped. Now it appears that some of the finishing mills that have large warehouses are on the verge of being seriously affected. Plants producing sheets and tinplate are especially likely to become involved, although they are equipped with relatively large warehouses.

The stocking of finished products that has been in progress for weeks is proceeding more rapidly and is fast approaching the stage where production must necessarily be greatly curtailed. In certain instances of the kind—chiefly of sheet and tinplate manufacturers—where warehouses are so capacious that it would take many weeks of production to fill them, the accumulation must be very large.

The expected curtailment of pig-iron production will be brought about by the small supplies of coke on hand at the smelters. The scarcity of coke is what has forced the Carnegie Steel Co. to close 20 of its blast furnaces. It is understood that the concern has about 500,000 tons of pig-iron and scrap in reserve—quite a round tonnage—but the bulk is probably scrap. Other steel producers are not so well prepared.

During the early part of the week steel buyers adopted a conservative attitude. They were then of the opinion that the price advance movement in the steel industry was over, for the time being, at least, and that a quiet market would be ushered in by the new year. The news of what the Entente reply to Germany's peace note was likely to be, however, has forced them to revise their opinions, and a considerable inquiry developed at the close of the week for finished steel products. Some market observers predict that the strongest pinch for steel has not yet been seen, but will come next February or March.

The Entente Powers were again in the market late last week for shell steel and other unfinished products. The Italian Government placed an order for 3000 tons of alloy steel with various American mills, half of which will be furnished by Atkinson & Utech, Inc., for the Charleston Steel Co. The other half of the contract will be produced by a manufacturer of crucible steel in the Central West. Inquiries for commercial steel were also very heavy for foreign shipment. It is

estimated that export contracts now under negotiation call for between 750,000 and 1,000,000 tons of steel, of which 400,000 tons are for France. The inquiries include billets, blooms, sheet bars, skelp, plates and heavy and light section rails, as well as steel used in the manufacture of war munitions. Japanese interests have purchased 8000 tons more of ship plates from an Eastern Pennsylvania mill.

Advices from Pittsburgh late last week were to the effect that the sheet market was developing a stronger tone as to early deliveries and a decrease in interest in late shipments. As the mills that were willing to sell for late deliveries are filled the latest development does not make much of a change in the actual market. Since the American Sheet & Tin Plate Co. advanced its minimum on blue annealed sheets to 4 cents, the market has easily become established at that price. Prior to the advance some of the mills were obtaining 4 cents, and occasionally even more, by being able to make fairly early deliveries.

Galvanized sheets for anything like early delivery are bringing higher prices, and as high as 7.50 cents is reported as having been done recently, though only on small lots for prompt shipment. The bottom of the market is still regarded as 6.25 cents, but this quotation is still considered as being largely nominal, most sellers insisting that they would not sell within several dollars a ton of that price for any delivery.

With the general slowing down in business over the holidays, the edge came off the pig-iron market last week. There is no tendency on the part of producers, however, to lower prices, and in view of the latest developments in the European situation the reverse is expected. Then there is a great danger that the present restriction in output, on account of the coke scarcity, will continue long enough to affect supplies. The chief point about the present pig-iron market is that most grades have dropped to their base levels, there being no premiums or effort to secure a higher price on a fresh scale than was done in the last transaction. The period in which nearly every sale was at a successively higher price is evidently past.

It is estimated that during December merchant furnaces took business for about 450,000 tons of pig-iron in various grades. It is reported that 50,000 tons more will be closed in the next few days, making the total for December 500,000 tons. This is only about one-third of the tonnage booked in November, but last month's transactions were record-breaking for a single month. Total transactions in the last quarter of the year were about 4,000,000 tons, the largest volume of business for any quarter in trade history, not even excepting the period about 10 to 15 years ago, when the United States Steel Corporation and the large independent steel companies made heavy purchases in the open market.

Another buying wave in pig-iron on foreign account is anticipated by furnace agents in this territory. Numerous inquiries for both steel-making and foundry iron for export to belligerent and neutral countries in the past two days have come to the surface. The demand is especially urgent for Bessemer and low phosphorus, which are in light supply even for shipment in the next three months.

Foreign consumers, recognizing the futility of securing large tonnages, are confining their inquiries to about 3000 to 5000-ton lots, although their needs are greater, with the hope of preventing excitement and a too rapid rise in prices. Italy, France and Holland are again sounding the market for more low phosphorus, and Italy and France also for Bessemer. The prospect for the larger volume of business in foundry grades for export is more promising than for steel-making iron. It is estimated that about 30,000 tons of the former grades are wanted by Holland, Switzerland, Norway, Sweden, Italy, and from South America.

The railroad blockade has acted as a stopper on the scrap iron and steel trades. The embargoes effectively prevent material from being shipped, and nobody feels safe as to either buying or selling. Shipments on contract are much interfered with. Not enough business was transacted last week to establish market prices. Occasional sales made have been at various prices, depending on the location rather than the intrinsic value

of the material. Only an appraisal of the market can be made, and quotations for last week have been reduced quite generally on most grades by \$1 or \$2 a ton.

(Dealers' average buying prices for gross tons.)

Bessemer billets (nominal).....	\$50.00—\$55.00
Open-hearth billets (nominal).....	60.00—65.00
Open-hearth sheet bars.....	60.00—65.00
Bessemer sheet bars (nominal).....	60.00—65.00
Forging billets.....	80.00—85.00
Wire rods.....	75.00—80.00
Tank plates.....	3.50—4.50
Steel bars.....	3.00—
Refined iron bars.....	3.25—
Rails.....	50.00—51.00
Steel hoops.....	3.50—
Cold-rolled strip steel.....	6.50—7.00
Sheets, No. 28 gauge.....	4.00—4.50
Galvanized sheets.....	6.25—6.50
Wire nails, No. 28.....	3.00—
Cut nails.....	3.00—
Plain fence wire, base.....	2.75—
Barb wire, galvanized.....	3.85—
Railroad spikes.....	3.65—

Pig-Iron.

Bessemer, Pittsburgh.....	\$35.95—
No. 2 foundry.....	30.95—32.95
Basic, valley.....	30.95—
Gray forge.....	29.95—30.95
Basic, Philadelphia.....	30.00—32.00
No. 2 foundry, Northern.....	30.75—31.75
Low phosphorus.....	53.00—55.00
No. 2 foundry, Buffalo.....	35.00—
No. 2 South, Cincinnati.....	27.90—28.90
Northern foundry, No. 2 Cleveland.....	30.95—31.95

Scrap-Iron and Steel.

Heavy melting steel.....	\$24.00—\$25.00
Old steel rails, re-rolling.....	28.00—30.00
Old iron car wheels.....	21.50—22.50
Old steel car wheels.....	30.00—31.00
Steel car axles.....	45.00—48.00
Iron car axles.....	45.00—48.00
Low phosphorus.....	32.00—33.00
No. 1 cast scrap.....	22.00—23.00
Heavy cast scrap.....	20.00—21.00
No. 1 railroad wrought.....	25.00—26.00
Cast borings.....	12.50—13.00
Machine shop turnings.....	12.00—12.50
Railroad malleable.....	21.00—22.00
Stove plate.....	13.00—14.00

METAL MARKETS PRESENT PERPLEXING CONDITIONS.

Copper Prices Register Further Declines in Face of Late War News—Peace Talk Brings "Invisible" Stocks to Light—Market Is Technically "Dull and Steady"—Spelter Again Active, With Higher Prices—Lead and Tin Show More Activity.

New York, January 2—[Special.]—What are manifestly perplexing conditions in all of the metal markets were created last week as a result of Germany's peace proposal, President Wilson's note and Secretary of State Lansing's "explanation." With regard to copper the situation is one of the most contradictory and perplexing ones that can be imagined. While the market was reported as being "dull and steady" all week, prices declined and new offerings at lower prices almost daily made their appearance. When the "continued war" news became public on Friday it was expected that the market would make a sharp advance. It did nothing of the kind, however. Offerings of first quarter electrolytic copper appeared on that day at 31 cents, one-half cent lower than on the previous day, and did not find buyers. Opinions differed in the trade as to the significance of these offerings. Some producers were of the opinion that they were put out with the intention of depressing the market, while others were just as positive that they represented a genuine desire to sell. Another question that no one can answer is, where did this copper come from? A few weeks ago it was said that there was no copper in producers' hands for shipment before May or June, and only a negligible amount owned by dealers and operators. And yet there have been millions of pounds on the market lately for each month in the first quarter.

Spelter, the first metal to feel the effects of the peace movement, and to be most severely affected, was the first to respond to the news that the war was to go on for at least another year. During the latter part of the week there was a better demand from consumers, although there was no buying of importance from brass manufacturers. The market may be considered, however, to be marking time, as there is no indication what the next move will be. Tin and lead were both in better demand at the close of the week, and prices showed an upward tendency.

The tin market was very sensitive last week, with dealers disinclined to quote. Late in the week, owing to efforts to buy from reluctant sellers, the spot price advanced sharply. There seemed to be somewhat of a short interest in the market, and very naturally the

holders of spot tin became shy. Undoubtedly these conditions were caused by London and stimulated the market there, illustrating the light supply and close concentration of stocks in America. Total arrivals of tin from December 4 are 3465 tons, and stocks afloat are 4993 tons.

An improved demand developed for lead late in the

week, and a good volume of business was transacted. It should be mentioned that most of the sales were on an average basis, buyers showing a preference to take a chance on the price at time of shipment rather than pay a fixed price. This is often the case when the market is high and the outlook is uncertain, such as at the present time.

THE WEEK'S PRICES.

	Copper.		Lead.		Spelter.	Tin.
	Lake.	Electrolytic.	A. S. & R. Co.	Independent.		
Monday, December 25.....	*	*				
Tuesday, December 26.....	31.00-32.00	31.00-31.50	7.50	7.50 - 7.62½	9.80-10.05	40.82½
Wednesday, December 27.....	31.00-31.50	31.00-31.50	7.50	7.50 - 7.62½	9.80-10.05	40.50
Thursday, December 28.....	31.00-31.50	31.00-31.50	7.50	7.50 - 7.62½	9.80- 9.92½	40.75
Friday, December 29.....	29.50-31.00	29.75-31.00	7.50	7.62½	10.05-10.12½	41.75
*Holiday-No market.						

Most Spectacular Iron Market in South's History Closed With Bright Outlook for New Year.

Birmingham, Ala., December 30—[Special.]—The year 1916 marks the most spectacular iron market that the South and the Birmingham district have ever witnessed—not in the matter of top-notch base price, but the suddenness with which a situation was thrust upon an iron and steel center which caused record production and kaleidoscopic-like changes in prices. For many months previous to the advance in prices of iron and steel products in the South, the North and Middle West had been enjoying the fruits of unprecedented prosperity. The situation had reached the apex of demand, which was far in excess of capacity in those sections, and the only other recourse for additional tonnage was in the South. Hence the immediate "thrust" of prosperity upon Southern iron and steel producers which made pig-iron prices advance over night from \$1 to \$2 per ton in some instances, and the determination to blow in every available idle stack which had been out since 1907, thereby creating the most remarkable iron market situation which the South has ever experienced. A review of the pig-iron market for the past three years reveals the fact that at the close of 1914 the average price of Birmingham pig-iron was \$9.75 per ton at the furnace; the average price at the close of 1915 was \$14.75, and at the close of 1916, \$24 per ton at the furnace.

In addition to this, the year 1916 reveals a situation very peculiar to the pig-iron industry. During anything like normal times it is the custom of iron producers at the beginning of the last quarter of a year to offer the sale of their product only through the first and second quarters of the following year. The year 1916 has witnessed the sale of pig-iron through the entire year of 1917, which represents the sale of iron ahead for 15 to 16 months instead of from six to nine months, as heretofore. The year 1916 has also witnessed the greatest production of basic pig-iron in its history. At the present time four foundry stacks of large capacity are busily engaged in the manufacture of basic pig-iron, and in addition the largest producer of metal in the South has practically withdrawn from the market in the sale and manufacture of foundry iron, using nearly every furnace in the production of basic for its steel needs.

The coal and coke markets of the Birmingham district have also come in for their share of unprecedented prices. During the first five to six months of the year furnace coke was selling for \$2.65 to \$2.75 per ton at the ovens and foundry coke for \$3 to \$3.25 per ton at the ovens. The year closes with heavy tonnages of foundry coke on the books of producers far into next year at \$5.50 to \$6 per ton at the ovens, with spot coke selling at \$9 to \$10 per ton. The furnace coke, whatever there may be available, is being sold at \$4.50 to \$5 per ton at the ovens. Practically 80 per cent. of the old beehive ovens are in commission and all of the by-product ovens. At the present time there is under construction 97 additional by-product ovens which will be completed during 1917.

The cast-iron pipe market has also been a very active factor in the industrial life of the district during the year. Production capacity has been materially advanced during the year, and many new and novel methods of manufacture have been installed, chief among which is the introduction by the American Cast Iron Pipe & Foundry Co. of the use of hot metal direct from the blast furnace, to be mixed with cupola metal. The United States Cast Iron Pipe & Foundry Co. will begin

the production of 30,000 to 35,000 tons of cast-iron pipe for South American points the first of the year. This company also remodeled and put in commission the plant of the Dimmick Pipe Co. The Lynchburg Foundry Co. at Anniston has remodeled its large high-pressure pipe plant, and it will be blown in on the first of the year. Two soil-pipe plants have been built and put in commission during the year.

From every angle the industrial situation in the Birmingham district has been strengthened very materially. Many of the iron and coal and coke-producing interests which have for years been barely making operating expenses are now on solid dividend-paying basis, and there is much in prospect for the coming year.

Following are producers' and dealers' prices per gross ton f. o. b. cars plants:

PIG-IRON.	
No. 1 foundry and soft.....	\$23.50 to \$24.50
No. 2 foundry and soft.....	23.00 to 24.00
No. 3 foundry.....	22.50 to 23.50
No. 4 foundry.....	22.25 to 23.25
Gray forge.....	21.75 to 22.75
Basic.....	23.00 to 24.00
Charcoal.....	26.00 to 27.00
OLD MATERIAL.	
Old steel axles (net ton).....	\$35.00 to \$36.00
Old steel rails.....	20.00 to 21.00
No. 1 wrought.....	20.00 to 21.00
Heavy melting steel.....	19.00 to 20.00
No. 1 machinery.....	18.00 to 18.50
Car wheels.....	16.00 to 17.00
Tram car wheels.....	15.00 to 16.00
Store plate.....	12.50 to 13.00
Shop turnings.....	10.00 to 11.00

Great Increase in Arkansas Mineral Production

Little Rock, Ark., December 30—[Special.]—Coal has been mined in Arkansas, commercially, during the last 76 years, or since 1840, and in that time its mines have produced a total of 38,395,128 tons.

For the year ending June 30, according to the report of the State mine inspector, just made public, the State produced a total of 1,910,298 tons, valued at \$3,452,717. There is \$2,594,260 in capital invested in the coal mines of the State.

Every mine in the State is being operated on full time. There are 145 mines, and the coal taken from them exceeded by 50 per cent. the total amount of capital invested. There are 4069 men employed, and they used 78,734 kegs of black powder, costing \$157,468.

The tonnage produced in the various counties is shown in the following statement:

County.	Tonnage.	Value.
Sebastian.....	1,350,147	\$1,161,000
Franklin.....	224,593	404,260
Johnson.....	207,214	518,035
Pope.....	85,590	267,370
Logan.....	32,805	82,012
Scott.....	7,953	13,697
Washington.....	1,990	6,321
Crawford.....	4	12
Yell.....	No report	

The amount invested in the coal mines of the various counties is shown in the following statement: Sebastian, \$1,163,860; Franklin, \$183,850; Johnson, \$531,450; Pope, \$407,100; Logan, \$190,750; Scott, \$104,600; Crawford, \$1500; Washington, \$6250; Yell, \$4900.

During the year there was produced in the counties of Saline and Pulaski 272,033 tons of bauxite ore, valued at \$1,387,368. During the same period the value of zinc ore produced in the State increased from \$65,214 to \$801,754.

The State mining inspector estimates the aggregate value of all minerals produced in Arkansas for the year 1914 to have been \$5,785,199, which was greatly increased during the past year.

RAILROADS

BIG RAILROAD DEAL PUT THROUGH.

Southern Railway Gets Line Expected to Result in New Through Route to Crescent City.

Very important developments are expected to follow the acquisition of the New Orleans & Northeastern Railway by the Southern Railway Co., which has just been announced by President Fairfax Harrison through H. W. Miller, vice-president of the system at Atlanta.

As published in the MANUFACTURERS RECORD on November 16 last, the English stockholders in the road, known as the Ehrhanger interests, disposed of their securities (about \$12,500,000) to J. P. Morgan & Co. of New York, and it was stated at the time that the purchase was made in the interest of the Southern Railway, which statement is now confirmed officially.

Although the Southern Railway Co. has declined to make any statement at present than that the New Orleans & Northeastern Railroad has been acquired, it is understood in railroad circles South that the company will, as soon as advantageously possible, establish a new through route between New York and New Orleans, trains going to Atlanta as at present, but from there going over the Southern's own lines via Birmingham to Meridian, Miss., and thence over the New Orleans & Northeastern Railroad 196 miles to New Orleans. Valuable waterfront and terminal facilities at the Crescent City will also be obtained.

That this route will become the main line to and from New Orleans for Eastern travel is fully expected, and that it will be double-tracked and built up to a high standard to correspond with the Southern Railway's main line between Washington and Atlanta, on which the second track all the way through is fast nearing completion, is also regarded as a foregone conclusion. The Queen & Crescent Route service will continue as it has always been, from Cincinnati via Chattanooga and Meridian to and from New Orleans.

It was stated at the Southern Railway offices in Washington with reference to the acquisition of the New Orleans & Northeastern that no new construction as a result of the deal is proposed at present; that is, there is no new line to be built. This, of course, does not mean that double-tracking may not follow any considerable increase in the traffic of the road.

Between Atlanta and New Orleans the New York trains of the Southern Railway now run over the Atlanta & West Point Railroad and Western Railway of Alabama from Atlanta to Montgomery, and thence over the Louisville & Nashville Railroad via Mobile to New Orleans, this arrangement being under traffic agreements with those lines. By adopting the new route via Birmingham and Meridian the Southern would have a through line entirely under its own control and all the revenues from which would be to its own advantage. But the agreements with the roads named must be terminated before the new route could be adopted.

It must be noted that the Southern Railway, in acquiring the New Orleans & Northeastern, gives up its minority interest in the Alabama & Vicksburg Railway, from Meridian to Vicksburg, Miss., and the Vicksburg, Shreveport & Pacific Railway from Delta, opposite Vicksburg on the Mississippi River, to Shreveport, La.

It is also reported from Macon, Ga., that the Southern Railway contemplates double-tracking its line from Atlanta to that city, and also the Georgia Southern & Florida Railway from Macon to Jacksonville, Fla., to improve through service.

Improving Mechanical Plant at Louisville.

The Illinois Central Railroad is making extensive improvements to its mechanical facilities at Louisville, Ky., for the repair of cars and engines. The plan includes the erection of a roundhouse with 17 stalls and an 85-foot turntable at a cost of \$56,000; a machine shop to cost \$20,000, and a two-story lavatory building for enginemen and shop men to cost \$10,000. Besides these structures, there will be built a one-story lavatory building for car repair men, cost \$3500; a paint shop and office for car repair foremen, \$3500; sandhouse, sandbin, etc., \$4000, and a station and yard office, about

\$6000. The contractor for the buildings is the firm of Joseph E. Nelson & Sons of Chicago. The machine shop is to be of brick and steel, with tile roof.

HEAVY EXPENSES DECREASE NET INCOME.

Statement of Baltimore & Ohio Shows Nearly \$1,100,000 Decline as Compared With Year Ago.

The Baltimore & Ohio Railroad Co., in connection with its announcement of the declaration of the usual semi-annual dividends payable March 1, also makes public a statement of the operations of the system for the last six months of 1916, which is based upon actual figures for five months and on estimated figures for December. Comparisons as to increases or decreases is made with the corresponding period of 1915. The total operating revenue for the last six months was \$61,655,914, increase \$5,615,610; total operating expenses \$43,565,184, increase \$5,726,781; net operating revenue \$18,090,730, decrease \$111,172; operating income after accrued taxes \$16,000,763, decrease \$476,955; gross corporate income \$18,634,750, decrease \$338,702; net income after deductions for interest, etc., \$8,187,411, decrease \$1,095,510. After the payment of dividends out of this balance there will be left for surplus \$3,211,574.

Illustrating the increase in the cost of equipment, another statement issued by the Baltimore & Ohio says that the freight cars contracted for recently at \$1600 each cost twice as much as similar equipment bought two years ago. Sharp advances have also been made in the prices of locomotives. The company expended during the year for new locomotives and cars and for rebuilding equipment already on hand about \$12,000,000. The equipment bought included 71 locomotives, 50 passenger cars and 7709 freight cars, making the total equipment of the company average 23 cars owned per mile of road. Over 95 per cent. of the revenue-producing cars are either of all-steel construction or are reinforced with steel.

Miltonberg & Southeastern, a New Road.

The Miltonberg & Southeastern Railroad Co. of Alexandria, La., has been chartered to build a line both east and west from Miltonberg, which is about seven miles west of Alexandria on the Alexandria & Western Railway. The construction projected immediately is from Miltonberg southeast to a connection with the St. Louis, Iron Mountain & Southern Railroad at a point about eight miles south of Alexandria, but this may be extended further in the same direction if desired; also westward from Miltonberg to Leesville, La., about 40 miles. Other extensions may be made later. The capital stock is \$100,000. George B. Morley is the principal stockholder with 267 shares of \$100 each, others next in order being W. A. Brewer, 215 shares; Mrs. Henry Nieustedt, 216 shares; A. H. Morley and Frank D. Ewen, 100 shares each; W. D. Brewer, 99 shares, and E. W. Glynn, N. S. Scott and E. Bullington, 1 share each. Walter D. Brewer is president and general manager; Nauman S. Scott, vice-president, and Ernest Bullington, secretary-treasurer.

May Use Electric Engines for Coal Trains.

The Virginian Railway Co., according to a report from Princeton, W. Va., is investigating with a view to the possibility of operating electric locomotives on its line between Elmore and Clarks Gap for the handling of heavy coal trains.

The success which has attended the operation of the Norfolk & Western Railway between Bluefield and Vivian with electric locomotives has turned the attention of several other railroad companies to the advantages of the newer motive power over steam, for difficult grades and heavy burdens especially. The Western Maryland Railway is another line which is understood to have under consideration the use of electricity on its grades over the Blue Ridge Mountains.

Neither of these roads has yet made any announcement to indicate the probable result of their investiga-

tions and inquiries, but the advantages of electricity over steam under difficult operating conditions have been so proven by the experience of the Chicago, Milwaukee & St. Paul Railway as well as by the Norfolk & Western, not to mention other roads, that it will not be surprising if there is a considerable extension of its use in a year or two.

New Equipment.

Norfolk & Western Railway, in addition to building 1000 gondola cars in its shops at Roanoke, Va., has ordered 1000 ventilator box cars from the Mt. Vernon (Ill.) Car & Manufacturing Co.

Virginian Railway has ordered 10 Mallet type locomotives from the American Locomotive Co., New York. The road is also reported in the market for 1000 freight cars of various types.

Illinois Central Railroad is getting prices on 500 automobile cars.

Florida East Coast Railway has ordered 8 passenger cars, 3 baggage cars and 3 express cars from the Pullman Company, Chicago.

Chicago, Burlington & Quincy Railroad has ordered 1850 tons of bridge steel from the American Bridge Co.

Central of Georgia Railway has ordered 11 passenger cars from the American Car & Foundry Co., St. Louis.

New Orleans, Texas & Mexico Railway, which ordered 500 box cars from the American Car & Foundry Co., is reported in the market for 500 to 600 more cars, including about 100 steel tank cars.

South Leads in Railroad Construction.

Statistics of railroad construction for the entire country during 1916, like those for the South published last week in the MANUFACTURERS RECORD's annual review, show but a very small increase as compared with 1915, according to the Railway Age-Gazette. There were only 1098 miles of new line built in the United States, yet the South provided more than one-half of this (589 miles), as previously noted. It was in about the same ratio that the Southern States exceeded the rest of the country a year ago, for then the total for the United States was 933 miles, of which the South built 503 miles.

Will Merge Several of Its Lines.

The Western Maryland Railway Co. has applied to the Maryland Public Service Commission for the approval of a consolidation of several of its lines, including the Connellsville extension. They are to be merged in a new corporation to be called the Western Maryland Company. They include the Baltimore & Harrisburg Railway and its eastern and western extensions; Baltimore & Cumberland Valley Railway, and railroad, Georges Creek & Cumberland Railroad and Connellsville & State Line Railway.

Railroad Notes.

The Chesapeake & Ohio Railway Co. announces that an increase in pay of 5 per cent., beginning January 1, will be given to all its employees at offices and stations and in dining and parlor cars whose rates of pay are not covered by agreements, who have been in the company's service at least one year, and whose pay has not been advanced since January 1, 1916. This provides for clerks and others who are not members of the railroad unions.

The Mercereau-Hawkins Tie Co. of Huntington, W. Va., has been given a contract by the Chesapeake & Ohio Railway Co. to provide it with crossties during the year 1917. It is said that this will mean furnishing more than 1,000,000 ties.

A committee appointed by the Short Line Railroad Association at its recent annual meeting in Washington, D. C., to investigate and report on the use of Edison storage battery cars on short and branch lines is to visit and study various operations in different parts of the country. J. B. N. Cardoza & Co., Inc., of Norfolk, Va., who sell these cars, are inviting requests from interested parties who may desire information and any particular points which they may wish investigated will be submitted to the committee.

Good Roads and Streets

SOUTHERN HIGHWAY ACTIVITIES.

Details in regard to road and street undertakings and bond issues, briefly mentioned below, are given under the proper headings in our "Construction Department" and "New Securities," published elsewhere in this issue.

Bonds Voted.

El Paso, Tex.—City voted \$40,000 bonds for street improvements.

New Augusta, Miss.—Perry county voted \$200,000 bonds to construct roads.

Parsons, W. Va.—Tucker county voted \$210,000 bonds for road construction and improvements.

Bonds to Be Voted.

Oberlin, La.—Allen parish will vote on \$750,000 bonds to construct roads, etc.

St. Petersburg, Fla.—City votes February 16 on \$4000 bonds for brick paving.

Contracts Awarded.

Baltimore, Md.—City awarded contract for 30,000 square feet of cement concrete sidewalks; \$5000 available.

Brownwood, Tex.—Brown county awarded \$100,000 contract to construct roads.

Eufaula, Okla.—McIntosh county awarded \$5857 contract to improve 10 miles of highway.

Hallettsville, Tex.—Lavaca county awarded \$15,500 contract to construct 10 miles of gravel roads.

McAlester, Okla.—City awarded contract for 15,644 square feet of sidewalk.

Monroe, La.—Ouachita parish awarded \$205,817 contract for road construction.

Washington, D. C.—City awarded \$28,410 contract for grading 16th street.

Welch, W. Va.—McDowell county awarded contract for 60 miles of grading.

Wheeling, W. Va.—Ohio county awarded \$70,000 contract for road improvements.

Wiggins, Miss.—City awarded contract for one mile of concrete sidewalk.

Mount Pleasant, Tex.—City awarded \$24,574 contract to improve one mile of streets.

Contracts to Be Awarded.

Barbourville, Ky.—Knox county will improve 15 miles of roads.

Hazard, Ky.—City will lay curb, gutters and sidewalks on several streets; cost \$50,000.

Jenkins, Ky.—City will improve streets; cost \$40,000.

Arkansas Plans Extensive Road Work.

Little Rock, Ark., December 30—[Special.]—That the era of good-road building has dawned in Arkansas is shown by the biennial report of W. B. Owen, State Highway Commissioner. It has followed a campaign of education and agitation extending over a long period of years. Following the creation of a State department charged with the oversight and the propagation of improved roads, there has been a wonderful impetus to the movement which was not possible formerly. Salutory laws have also been a great aid, and improvements and extensions of the present statutory provisions are contemplated in the session of the General Assembly to convene in January.

During the two years now closing the department has made preliminary surveys, plans and estimates of cost for 2232.73 miles of improved road, of which 2109.02 miles are sure of construction. It is estimated that the cost of these roads will be \$8,651,161.61.

There is now in the State Highway Commission fund and payable January 1, 1917, a total of \$88,900.47. This, with the State's share of \$5 from each automobile license issued in the State, will, according to the plans of the commissioner, make a nucleus of the annual ap-

preparation to be made by the State to enable Arkansas to participate in the Federal good-road fund.

There is now under actual construction a total of 429.14 miles in 25 counties, being built at an actual cost of \$1,941,895.47. Of the total amount of improved road being built, the greater part of it, costing a total of \$1,113,172.22, is being constructed under the Alexander road law, which was passed by the Legislature of 1915, and has since been sustained in various phases by the Supreme Court. It has proven one of the most progressive pieces of road legislation ever enacted in Arkansas, and when supplemented by additional laws will make this one of the leading States of the Union in good roads.

Road Contract Exceeding \$200,000.

Road construction in Ouachita parish, Louisiana, has been contracted for by the Police Jury, this contract amounting to \$205,817. The improvements are in two districts, and the contractor is the Womack Construction Co. of Sherman, Tex.

Road Contract Awarded at \$100,000.

About \$100,000 will be the cost of roads which the Brown County Commissioners, Brownwood, Tex., have ordered. This contract has been awarded to N. A. Dawson of San Antonio.

TEXTILES

\$11,444,700 FOR SOUTHERN MILLS.

Total of 457,788 Spindles and 6511 Looms Announced During 1916.

Last year's announcements of spindles and looms to be installed for new mills and for existing plants adding to their equipments are in excess of those for 1915. The activity which resulted in these totals was greatest during the second quarter, with the fourth quarter nearly its equal.

The 1916 reports, gathered from all the mill sections of the South by the MANUFACTURERS RECORD, show a total of 457,788 spindles and 6511 looms, which may be conservatively estimated as requiring the investment of \$11,444,700, was decided upon for the equipments of mills to be built and for additional installations by established cotton factories. These equipments, so largely increasing the Southern cotton-mill industry,

include an investment estimated at about \$8,000,000 for adding to the facilities of established cotton-mill enterprises, about 334,000 spindles and 6051 looms being required, while about \$3,000,000 is the amount estimated as the cost of installations totaling about 123,000 spindles and 460 looms by new organizations.

Southern cotton-mill owners continue to add largely to their facilities, and during 1916, as for many years past, their investments for building additions for existing mills are much larger than the investments for strictly new establishments. In many of the latter cases the experienced cotton-mill managers are financially interested, and assist with their knowledge of the industry.

During October, November and December, comprising the fourth quarter of 1916, there was announced a total of 124,968 spindles and 2154 looms, an estimated investment of \$3,124,200. These figures are divided as follows: 77,900 spindles and 2094 looms, a \$1,947,500 investment, for 11 companies enlarging their mills; 47,068 spindles and 60 looms, a \$1,176,700 investment, for the mills of 11 new companies. For January, February and March, the first quarter of 1917, the figures were: 76,596 spindles and 1500 looms, a \$1,880,900 investment, for 10 companies enlarging their mills, there being no new companies for this quarter. The second quarter, comprising April, May and June, presented the following figures: 94,720 spindles and 1461 looms, a \$2,368,000 investment, for 13 companies enlarging their mills; 62,816 spindles, a \$1,570,400 investment, for 9 new plants. During July, August and September the reports total as follows: 85,616 spindles and 996 looms, a \$2,140,400 investment, for 10 companies enlarging their mills; 13,072 spindles and 400 looms, a \$329,050 investment, for 3 new mills.

Lookout Knitting Mills.

Men's union suits, 100 to 150 dozen daily, will be manufactured by the Lookout Knitting Mills of Chattanooga. This company was incorporated some weeks ago, and it has organized with these officers: E. B. Thomasson, president; A. S. Revierie, vice-president; E. M. Thomasson, secretary-treasurer. It has leased a 140x60-foot three-story mill building and a 50x30-foot dyehouse, of concrete construction. The installation of equipment will include 12 knitting machines, sewing machines, electric power drive, etc., costing \$30,000.

Textile Notes.

The Jackson Mills, Iva, S. C., has completed a 90x60-foot clothroom addition and ordered 3360 spindles,

60 looms and other machinery. About \$40,000 is the cost of the new building and equipment.

The Princeton Manufacturing Co., Athens, Ga., is not planning any additions; recent report was an error.

E. G. Morrison, Lawndale, N. C., plans to build a hosiery knitting mill, and wants to correspond with manufacturers of the necessary machinery.

The Reynolds Cotton Mills Co., Bowling Green, S. C., has a \$12,000 building equipped with \$18,000 machinery, including 1800 spindles, etc. This company's organization was recently announced.

Upper St. Johns Drainage District.

The engineers of the War Department have granted permission to the Upper St. Johns Drainage District of Florida for proceeding with its plan to reclaim 350,000 acres of land. This drainage enterprise will involve an investment of from \$2,500,000 to \$3,000,000, and the plans are being furnished by Isham, Randolph & Co. of Jacksonville and Chicago. P. A. Vans Agnew, attorney for the district, Jacksonville, writes to the Manufacturers Record:

"The long-delayed permit approving the Randolph plan of the reclamation of the district was granted on December 22. The entire administration of the district has been delayed on account of this permission from the Federal Government. The next step will be the appointment of three commissioners (by the Circuit Court), whose duty it will be to make the benefit assessment upon the land. Meanwhile, it is contemplated by the supervisors to extend the boundaries of the present district by taking in a considerable adjoining acreage, which will give 350,000 acres if accomplished. Engineering surveys are now being carried on by Isham, Randolph & Co. upon this additional area. The work of the commissioners will probably not be completed under four or five months, after which the question of issuing bonds and undertaking the actual construction will come up for consideration."

Arundel Shipbuilding Company.

Organization has been effected by the Arundel Shipbuilding Co., recently chartered at Baltimore. This new enterprise has an authorized capitalization of \$1,000,000, of which \$500,000 is common stock and \$500,000 is 6 per cent. 20-year sinking fund first mortgage gold bonds. At present the company will issue \$225,000 stock and \$300,000 bonds. The main offices are at Fairfield, Md., and the officers are: Frank A. Furst, president; Joseph J. Hock, vice-president; W. Bladen Lowndes, secretary-treasurer; each holding the same offices with the Arundel Sand & Gravel Co. of Baltimore.

The Arundel Shipbuilding Co. has purchased the Arundel Sand & Gravel Co.'s shipyards as the basis of its activities.

Ajax Clay Works to Build.

Fire-bricks, hollow bricks, silo blocks and tile to the extent of 60 tons daily will be manufactured by the Ajax Clay Works of Macon, Ga. This company was recently incorporated with a capitalization of \$100,000, and proposals for its machinery are to be addressed to the Southern Pipe & Culvert Co. of Macon. Its main building will be of mill construction, 170x50 feet, and its plant will be equipped in separate units. The machinery is to include 10, 25 and 75 horse-power alternating current electric motors for driving the clayworking equipment.

Marine Ways at Mobile to Cost \$75,000.

An investment of \$75,000 for marine ways at Mobile is planned by Harrison Bros. This firm has leased property including a 500-foot frontage on the river, and is having blueprints prepared for the marine ways, which are to have a total tonnage of 1100. If the plans materialize as now contemplated there will be three ways of 200, 300 and 600 tons capacity, respectively.

Harrison Bros. are now operating ways for ships, and the new plant will be conducted separately from the present establishment.

Name.	Location.	Spindles.	Looms.
Alabama.			
Pope Manufacturing Co.....	Mobile.....	.....	60
Arkansas.			
*St. Francis Cotton Mills.....	Helena.....	5,000	....
Florida.			
George Giles & Co.....	Ocala.....	2,500	....
Ocala Knitting & Manufacturing Co.....	Ocala.....	2,500	....
		5,000	....
Georgia.			
*Flint River Cotton Mills.....	Albany.....	11,000	260
Cook Duck Mills.....	Cedartown.....	3,500	....
*Meritas Mills.....	Columbus.....	.....	350
		14,500	610
Maryland.			
Summerfield Baldwin, Jr.....	Phoenix.....	6,400	....
North Carolina.			
*Howell Manufacturing Co.....	Cherryville.....	2,500	....
Yount Cotton Mills.....	Conover.....	8,168	....
R. Grady Rankin.....	Gastonia.....	5,000	....
Ranlo Manufacturing Co.....	Gastonia.....	6,000	....
W. G. Reynolds and others.....	Gastonia.....	2,000	....
Mutual Cotton Mills Co.....	Gastonia.....	6,000	....
*Highland Cotton Mills.....	High Falls.....	5,000	....
*Corriher Mills.....	Landis.....	3,000	....
*Clinchfield Manufacturing Co.....	Marion.....	14,000	400
*Mays Mills.....	Mayworth.....	25,000	....
*Valdese Manufacturing Co.....	Valdese.....	5,000	....
		81,668	400
South Carolina.			
*Hamilton Carhartt Cotton Mills.....	Carhartt.....	7,400	234
*Fort Mill Manufacturing Co.....	Fort Mill.....	.....	850
		7,400	1,084
Tennessee.			
Cherokee Spinning Co.....	Knoxville.....	5,000	....
Total for first quarter of 1916.....			
		76,596	1,500
Total for second quarter of 1916.....			
		157,536	1,461
Total for third quarter of 1916.....			
		85,688	1,396
Total for fourth quarter of 1916.....			
		124,968	2,154
Total for the year 1916.....		457,788	6,511
*Established mills increasing.			

Construction Department

IN ORDER TO FOLLOW UP

Properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY

The MANUFACTURERS RECORD seeks to verify the items reported in its Construction Department by full investigation. It is often impossible to do this before the item must be printed or else lose its value as news, and in some items it is found advisable to make statements as "reported" or "rumored," and not as positive information. If our readers will note these points they will see the necessity of the discrimination. We are always glad to have our attention called to errors that may occur.

HOW TO ADDRESS

The name of one or more incorporators of a newly incorporated enterprise should always be written on letter addressed to the official headquarters or to the town of the parties sought, as may be shown in the item. Sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. By following these general directions the post-office will generally be enabled to deliver your mail promptly, although it is inevitable that some failure by the postal authorities to deliver mail to new concerns will occur, as our reports are often published before new companies are known and before they have any established office for the receipt of mail.

WRITE PERSONAL LETTERS

In communicating with individuals and firms reported in these columns a letter written specifically about the matter reported will receive better and quicker attention than a circular. In most instances a return postal card or addressed and stamped envelope should be enclosed with letter.

In correspondence relating to information published in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

DAILY BULLETIN

The Daily Bulletin of the Manufacturers Record is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$25 per year.

All advertising contracts in the Manufacturers Record for three months or longer include a subscription to the Daily Bulletin for the contract period, as well as a subscription to the Manufacturers Record.

BRIDGES, CULVERTS, VIADUCTS

Ala., Montgomery.—Central of Georgia Ry., C. K. Lawrence, Ch. Engr., Savannah, Ga., will build reinforced-concrete bridge; cost \$15,000, railway paying \$12,000 and city paying \$2500; 250 ft. long; 6½-ft. sidewalk on side of 20-ft. roadway; reinforced-concrete construction.

La., Oberlin.—Allen Parish Road Dist. No. 2 will vote on \$750,000 bonds to construct bridges and roads; C. Lindsay, Secy. Police Jury.

Md., Baltimore.—Board of Awards will build reinforced-concrete bridge 80 ft. long by 70 ft. wide; two 40-ft. spans and abutments; specifications, etc., at office Harbor Board. (See Road and Street Work.) (See Machinery Wanted—Paving, etc.)

Mo., Kansas City.—Board of Public Works approved plans for proposed 27th St. viaduct—Vine St. to Highland Ave.; concrete; single span 110 ft. long; total length 524 ft.; 40-ft. roadway with 6-ft. walks on each side.

Mo., Kansas City.—Missouri Pacific Ry., E. A. Hadley, Chief Engr., St. Louis, Mo., and Union Pacific R. R., R. L. Huntley, Chief Engr., Omaha, Neb., and city engineering department are planning rebuilding of James St. viaduct and bridge, connecting Kansas City, Mo., with Kansas City, Kans.; cost about \$125,000.

N. C., Statesville.—Snow Creek Drainage Dist., Commrs., H. R. Cowles, Secy., will erect 2 bridges in connection with drainage construction; bids until Jan. 8. (See Machinery Wanted—Drainage.)

Tenn., Memphis.—Southern Ry., W. H. Wells, Chief Engr. Constr., Washington, D. C., is reported to prepare plans for concrete bridge over tracks at Monroe Ave.; 66 ft. wide; 10-ft. sidewalk on either side; cost \$15,000.

Va., Roanoke.—Norfolk & Western Ry., J. E. Crawford, Ch. Engr., Roanoke, specifies appropriation of \$651,300 for bridge reconstruction during 1917.

W. Va., Welch.—McDowell County Commrs. let contract to Luten Bridge Co., York, Pa., for 8 concrete bridges in Sandy River Dist.; to Sam G. Walker for 5 iron bridges with concrete floors. (See Road and Street work.)

CANNING AND PACKING PLANTS

Ala., Prichard.—People's Canning Co., E. L. Harper, Prest., will build cannery; 50x100 ft.; sheet iron; concrete floors; daily capacity, 10,000 cans, with sufficient power to increase to 30,000 cans. (Noted in Nov. as inceptd. with \$8000 capital.)

Fla., Greensboro.—Dexell Enterprise Co. will add further equipment to plant for curing meats; install 2-ton refrigerating plant, wagon scale, containers, packages, etc. (See Machinery Wanted—Containers and Packages; Scale; Refrigerating Plant.)

Fla., Leesburg.—Geo. W. Wrennick will form company to establish canning and preserving plant. (See Machinery Wanted—Canning Equipment.)

Ga., Tifton.—Tifton Packing Co., Frank Scarborough, Secy., engaged C. L. Brooks Engineering Co., Moultrie, Ga., to design plant; John W. Greer, Secy. of Brooks corporation, advises Manufacturers Record: Now getting plans ready so construction may begin early in 1917; buildings of white sand-lime brick and concrete construction; cold storage machinery of 60 tons capacity; small ice plant for icing cars; daily capacity, 350 hogs and 50 cattle. (Heretofore noted organized, etc.)

Ky., Lexington.—Dairy Farm Packing Co., capital \$25,000, will be organized by Thos. P. Neet of Versailles, Ky., and C. A. Claus of Louisville; leased farm and packing-house; add cold-storage plant and improvements providing daily capacity kill and pack 100 hogs and 50 head cattle.

N. C., Wilmington.—F. W. Garrett, care of Bear & Co., is interested in proposed establishment of canning and preserving plant. (See Machinery Wanted—Canning and Preserving Machinery.)

CLAYWORKING PLANTS

Ga., Macon.—Fire Brick, Tile, etc.—Ajax Clay Works (lately noted inceptd. with \$100,000 capital) organized; offices in Ga. Life Bldg.; will erect 170x60-ft. mill construction main building, install machinery (separate units) for manufacturing fire brick, hollow blocks, silo blocks and tile; also 10, 25 and 75 H. P. electric motors; daily output, 60 tons. Address machinery proposals to Southern Pipe & Culvert Co. (See Machinery

Wanted—Clayworking Equipment; Electrical Machinery; Building Materials; Lumber; Roofing.)

S. C., Greenville.—Bricks.—Baxter Genoble of Pacolet, S. C., contemplates establishing brick plant, cost \$30,000, in Greenville or Chester, S. C.; daily capacity 50,000; J. H. Houck, Bristol, Tenn., interested.

W. Va., Wheeling.—Electrical Porcelains.—Wheeling Tile Co. increased capital from \$100,000 to \$300,000; purchased La Belle pottery; will remodel building and install machinery to manufacture electrical porcelain ware.

COAL MINES AND COKE OVENS

Ala., Yolande.—Yolande Coal & Coke Co., Birmingham, will develop mine for ultimate daily capacity 3500 tons coal; construct mile railway for transportation facilities; install engines, boilers, tipples, washers, etc., costing \$100,000; now drilling for opening; ultimate investment for this development to be probably \$300,000.

Ky., Coleman.—Kentucky Block Coal & Coke Co. acquired and will develop several thousand acres coal lands on Peter Creek.

Ky., Buffalo.—Four Seams Colliery Co. will install electrically-equipped plant in Hazard coal field.

Ky., Harlan.—White Star Coal Co. will increase capital from \$30,000 to \$50,000, and make improvements.

Ky., Jackson.—Albert B. Kerr, 49 Wall St., New York, writes to Manufacturers Record: The lands will be vested in holding company to dispose of timber; probably lease to developers for coal, oil and gas; timber cruisers report exceeding 100,000,000 ft. of white oak and exceeding 25,000,000 ft. of poplar, maple, beech and chestnut. (Lately noted buying coal and timber property from Kentucky Coal, Timber & Development Co.)

Mo., Kansas City.—Star Coal Co. controls: North Star Coal Co., Higbee, Mo.; Edward Aull Coal Co., Lexington, Mo.; Sherwood-Lester Coal Co., Liberal, Mo.; Denning Coal Co., Denning, Ark.; Armstrong Coal Co., Cincinnati; daily capacity 4000 tons coal; E. R. Dusky, Gen. Sales Agent, Commerce Bldg. (Lately noted inceptd.)

Va., Graham.—A. P. Penn and Harman Broyles of West Graham, Va., leased and will develop Russell county coal land.

Va., Norfolk.—Leckie Coal Co. takes over West Virginia Pocahontas Coal Sales Corp.; also represent additional mines; market 1,500,000 tons coal annually; on Virginia Railway operate 4 new mines with annual output 500,000 tons; market largely over Sewells Point coal pier. (Lately noted inceptd. with \$100,000 capital.)

W. Va., Buckhannon.—West Virginia-Ohio Coal Co., capital \$250,000, inceptd. by Chas. P. Lynch of Buckhannon, Fred L. Lynch of Akron, O., and others.

W. Va., Fairmont.—Battelle Coal Co., M. C. Lough, Prest., lately noted inceptd., capital \$120,000, advises Manufacturers Record: No development planned at present; is holding company with 300 acres bi-product low sulphur Pittsburgh coal.

W. Va., Morgantown.—Scott Run Coal Co., lately noted inceptd., capital \$25,000, organized; B. M. Chaplin, Prest.; S. M. Price, V.-P.; F. C. Shriver, Secy.; C. I. Lautz, Treas. and Mgr.; develop 50 acres. (See Machinery Wanted—Rail; Wagons (Pit), etc.)

COTTON COMPRESSES AND GINS

Fla., Brooksville.—P. L. Weeks will build cotton gin.

Okla., Martha.—Martha Gin & Cotton Co. chartered with \$11,000 capital by J. A. Doughty, S. E. Thrush and R. L. Newcomb.

COTTONSEED-OIL MILLS

Tex., Alto.—Alto Cotton Oil & Mfg. Co., capital \$25,000, inceptd. by H. H. Berryman, J. E. Watters and T. A. Arrant.

DRAINAGE SYSTEMS

Ark., Blytheville.—Comms. Keystone Drainage Dist. (A. C. Lange and others) are having plans prepared by Morgan Engineering Co., Memphis, Tenn., for drainage system; 300 mi. canals and ditches; levees; require removal of 30,000,000 cu. yds. dirt for canals

and levees; use floating dipper dredges and hydraulic dredges; concrete syphon, ¼ mi. long, to carry water under floodway; plans include utilization of existing channels of Little River and Right Hand Chute, which will require diversion of part of flow of Little River into Right Hand Chute and part into outlet channel of Drainage Dist. No. 9 of Mississippi County; district comprises 280,000 acres land in Poinsett, Craighead and Mississippi County; cost probably several million dollars.

Ark., Newport.—Jackson County, Maple Slough Drainage Dist., let contract to Carter Bros., Pine Bluff, Ark., for dredge scraper work, and to S. E. Duke, Swifton, Ark., for bridge construction; soon award concrete and tiling contracts; total cost to be \$70,000; W. A. Bowman, Engr., Newport. (Lately noted inviting bids.)

Fla., Melbourne.—Upper St. Johns Drainage Dist., Frank L. Bills, Prest., will proceed with plans; P. A. Vans Agnew, Atty. for Dist., Jacksonville, advises Manufacturers Record: War Dept. approved Randolph plan; next step will be appointment of 3 commissioners to make benefit assessment; supervisors contemplate adding adjoining acreage, increasing district to 350,000 acres; additional area being surveyed by Isham, Randolph & Co., Jacksonville and Chicago; work of commissioners probably not completed under 4 or 5 months, after which bonds and construction will be considered. (Previously noted; estimated that cost will be \$2,500,000 to \$3,000,000.)

N. C., Statesville.—Snow Creek Drainage Dist. (lately noted) elected A. R. Bowles, Chrmn., and H. R. Cowles, Secy. of Comms.; construct 11 mi. ditches; 363,000 cu. yds. earth; 2 highway bridges; bids until Jan. 8; W. D. Alexander, Engr., Charlotte. (See Machinery Wanted—Drainage.)

ELECTRIC PLANTS

Ark., Charleston.—People's Service Co. of Muskogee, Okla., has franchise to furnish electricity.

Ark., Nashville.—W. J. Risinger plans extending electrical transmission system to Mineral Springs.

Mo., Carrollton.—City Water & Light Co. contemplates improvements.

Okla., Henryette.—J. H. Sharp Electric Co. chartered with \$5000 capital by T. L. Bingham and others.

Okla., Muskogee.—Citizens' Service Co. chartered with \$100,000 capital by A. S. Nelson and others.

Okla., Stroud.—City let contract Chicago Bridge & Iron Co., 105th and Throop Sts., Chicago, at \$20,000 to improve electric-light plant and water-works; Benham Engineering Co., Engr., Colcord Bldg., Oklahoma City; W. A. Hadley, city official. Lately noted. (See Water-works.)

Okla., Woodville.—Woodville Electric Light & Power Co., capital \$1500, inceptd. by R. L. Buck, J. W. Bacon, M. U. Ayres and others.

Tenn., Bearden.—Colonial Lumber Co., J. D. Wyrick, Mgr., will install electric-light plant; asks bids until Jan. 31 for wiring, etc. (See Machinery Wanted—Electric Plants.)

Tex., Houston.—Baptist Sanitarium and Hospital, D. R. Pevoto, Supt., states that power-house (lately noted to be erected) is under contract; total cost about \$30,000; R. D. Steele, Houston, Archt.; will need equipment. (See Machinery Wanted—Power Plant Equipment, etc.)

Va., Norfolk.—Bureau Yards and Docks, F. R. Harris, Chief, Washington, D. C.—Install electric-lighting and power system for structural shop at Navy-yard. (See Machinery Wanted—Electrical Machinery.)

Va., Norton.—Old Dominion Power Co., capital \$500,000, inceptd.; D. Terperla, Prest., Dorchester, Va.; W. W. Kemp, Secy.-Treas., Norton.

Va., Roanoke.—Norfolk & Western Ry., J. E. Crawford, Ch. Engr., Roanoke, specifies appropriation of \$1,337,000 for further electrification of system during 1917.

FLOUR, FEED AND MEAL MILLS

Ga., Columbus.—I. H. Pitts & Sons Co. plans to install feed and grist mill; also peanut factory; invest \$30,000.

Ga., Newnan.—McBridge Grain & Feed Co.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

will rebuild \$16,000 feed mill destroyed by fire; plans double capacity of burned plant.

Okla., Hollis.—Hollis Mill & Grain Co. chartered with \$10,000 capital by J. W. Butler and others.

FOUNDRY AND MACHINE PLANTS

Ala., Anniston.—Cast-iron Pipe.—Central Foundry Co. plans to increase capital by \$600,000.

Ala., Birmingham.—Automobile Forgings, etc.—American Forgings Co., 2700 N. Twenty-fourth St., lately noted enlarging plant, etc., states will not install new machinery at present.

Ala., Gadsden.—Mining, Machinery, etc.—Queen City Machinery Co., capital \$6800, inceptd. by G. F. Bentley, E. B. Fullington and P. B. Bentley; will manufacture coal mining equipment, structural and ornamental iron, etc.

Md., Baltimore.—Electric Furnaces.—Electric Smelting Corp., Wilcomico and Bayard Sts., inceptd. with \$100,000 capital by John F. Dirzuweit, Adolph Schoenels and Carl J. Dirzuweit; plans to manufacture electric furnaces for melting copper, brass, etc.

Mo., St. Louis.—Railway Cars.—Pullman Co., Pullman, Ill., purchased site for construction of repair shops for railway cars; Leroy Kramer, V.P., wires Manufacturers Record: Details not yet complete; reports exaggerate situation; not ready at this time to give particulars. Mr. Kramer further writes to Manufacturers Record: Expect to move present repair shop (established over 30 years ago) to new and larger location; most of acreage will be for storage tracks; no plans yet; purchased 40 acres; branch repair works to cost \$500,000.

GAS AND OIL ENTERPRISES

Ala., Cordova.—Banner Oil Co. inceptd.; R. B. Watts, Pres.; R. D. Curry, V.P.; J. C. Waldrop, Secy.-Treas.; all of Birmingham.

Ala., Mobile.—W. P. Paterson Oil Co. chartered by W. P. Paterson and others.

La., Monroe.—Great Southern Oil Co., capital \$100,000, inceptd.; J. M. Collins, Pres., Chatham, La.; O. C. Bonduant, V.P. and Treas., Houston, Tex.

Mo., Kansas City.—Penn Public Oil Co., capital \$20,000, inceptd. by Raymond C. Bone, Jas. A. Carpenter and A. C. Barnett.

Okla., Ardmore.—Woodruff Oil & Gas Co., capital \$25,000, inceptd. by Leonard J. Woodruff and Ida Belle Woodruff of Ardmore, and Herman C. Woodruff of Staunton, Okla.

Okla., Cherokee.—Great Salt Plains Oil & Gas Co. chartered with \$10,000 capital by J. F. Henderson and others.

Okla., Dacoma.—Red Belle Oil & Gas Co., capital \$5000, inceptd. by O. L. Glasgow, S. H. Welch, A. W. Glasgow and A. J. Harter.

Okla., Dacoma.—McHighland Oil & Gas Co., capital \$15,000, inceptd. by John M. Robinson and others of Wotoka, Okla.

Okla., Idabel.—Lancaster Oil & Gas Co., capital \$6000, inceptd. by H. C. Morris, J. Randall Connell, E. E. Cochran and others.

Okla., Laverne.—Laverne Valley Oil & Gas Co. chartered with \$100,000 capital by J. A. Pettis and others.

Okla., Muskogee.—Alarm Oil & Gas Co. chartered with \$25,000 capital by H. L. Armstrong and others.

Okla., Nowata.—Gasoline.—Childers Gasoline Co. chartered with \$30,000 capital by H. J. Whitehill, H. W. Reed and W. O. Strother.

Okla., Oklahoma City.—Guiding Star Oil & Gas Co., capital \$200,000, inceptd. by S. I. Fish, J. D. Gasseur, Jesse Luster and others.

Okla., Sulphur.—Artesian Oil & Gas Co. chartered with \$150,000 capital by Chas. A. Bryan and others.

Okla., Tulsa.—Louray Oil Co., capital \$10,000, inceptd. by R. P. Mattocks, M. F. Owens and E. Hammond Jones.

Okla., Tulsa.—Oil Pipe Lines, etc.—Sinclair-Cudahy Pipe Line Co. (transportation subsidiary of Sinclair Oil & Refining Co.) purchased Tidal Oil Co.'s 34-mi. 6-in. trunk oil pipe line from Tidal property to Tulsa; will be connected with 800-mi. interstate trunk line under construction from Drumright to Chicago; Crystal Oil Co., controlled by Sinclair interests, purchased (for \$6,000,000) undivided half interest in 4700 acres of leases, near Hominy, with daily production 12,000 bbls. oil; this purchase subject to approval of Interior Dept.

Okla., Tulsa.—Mutual Oil Co. chartered with \$24,000 capital by J. M. Gillette and others.

Tenn., Pulaski.—Southern Oil & Gas Co., capital \$5000, inceptd. by Marvin Brown, C. E. Bull, C. H. Brown and others.

Tex., Houston.—Oil Pipe Line.—Sun Oil Co. contemplates construction of pipe line from Goose Creek field to wharf on ship channel. (See Miscellaneous Construction.)

Tex., Houston.—Midway Oil Co. chartered by J. F. Duncan and others; capital \$10,000.

W. Va., Cameron.—Low Gap Oil & Gas Co. organized with El Hinerman, Pres. and Gen. Mgr.; W. E. Lang, Secy.

W. Va., Mannington.—Dixie Oil Co. chartered with \$200,000 capital by C. L. Bush, D. A. Fitzgerald, D. L. Thomas and others.

HYDRO-ELECTRIC PLANTS

Ala., Montgomery.—Montgomery Light & Water Power Co. will undertake improvements; Harry D. Frenau, V.P. and Gen. Mgr., advises Manufacturers Record: Improvements as follows: Enlargement of 2 units at Tallassee hydro-electric plant from 875 to 1500 K. W. each; occupation of transformer-room, formerly built but never occupied; construction in North Montgomery of substation to handle our power load; rebuilding of down-town distribution system, including rearrangement of our feeders; new machinery ordered from Westinghouse Electric & Mfg. Co., Pittsburgh. (Lately noted to expend \$125,000 for improvements.)

ICE AND COLD-STORAGE PLANTS

Ala., Birmingham.—Centennial Ice & Coal Co. inceptd. with \$10,000 capital; H. G. Lansdale, Pres.; Ben Davis, Secy.-Treas.

Ark., Marianna.—Marianna Ice & Storage

tended and additional bridge and unloaders purchased; 30-ft. channel leading from main Baltimore channel will be deepened to 35 ft. to enable 17,000-ton ore boat to reach ore dock; 13 Bethlehem gas-driven blowing engines will be installed for blowing blast furnaces; these engines 47x54x60-in.; in same power-house will be 8 47x60-in. Bethlehem twin-tandem gas engines, driving 4000 K. W. generators; duplexing plant will be built, consisting of four 30-ton converters and four 200-ton tilting furnaces, equipped with waste heat boilers; two 1300-ton and one 250-ton hot metal mixers will be installed in connection with open-hearth plant.

Following mills will be added: 40-in. bloomer, with 24-in. and 18-in. billet mill for sheet bars and billets; 36-in. slabbing mill will be ordered, to slab for 3 plate mills, which will consist of 110-in. plate mill, 60-in. universal reversing plate mill and 166-in. plate mill; 3 merchant bar and rod mills of semi-continuous type; all these mills motor-driven; first 12 tinplate mills under way; 12 more will be added as soon as practicable, making 24 mills in all; blacksmith shop, 75x325 ft., is being started for these yards; extensions will be made to boiler, tin and pipe shops; cooper shops will be built; at these yards a 20,000-ton floating drydock for vessels up to 600 ft. by 80-ft. beam is under construction; dredging and concrete bulkhead contracted for.

IRRIGATION SYSTEMS

Tex., San Benito.—Cameron County Irrigation Dist. No. 2, Alba Heywood, Secy., voted \$800,000 bonds for irrigation work described in Aug.

THE OFFICIAL PROPOSAL ADVERTISEMENTS

Appear This Week On Page 96

Notices of bond sales, construction and improvement contracts to be let, equipment and supplies to be purchased, franchises offered, etc., inserted in this department bring bids from the most important bond buyers, investors, financial institutions, contractors, engineers, architects, manufacturers, and supply houses throughout the country.

Rate 25 cents per line per insertion.

The PROPOSAL department goes to press 9 A. M. Wednesday for the issue of the following day. If you cannot mail advertisement in time for any particular issue please wire copy by night letter.

Send for booklet of testimonial letters from public officials who have used the PROPOSAL department of the Manufacturers Record, for bond sales, construction work, etc.

Co., Julius Benham, Jr., Mgr., will rebuild cold-storage plant lately noted burned; let contract to R. L. Hampton, Marianna, for 36½x40x25-ft. frame structure covered with galvanized iron; let contract for 18-ton ice machine to Frick Co., Waynesboro, Pa.; improvements to cost \$12,500; ice plant and bottling works, 15 tons daily.

Fla., Greensboro.—Dezell Enterprise Co. will install 2-ton refrigerating plant. (See Canning and Packing Plants. See Machinery Wanted—Refrigerating Plant.)

Mo., Joplin.—Joplin Hay Co., R. D. Davis and E. M. Davis, owners (address for this installation Box 342, Webb City), contemplates installation of cold-storage plants for produce in Joplin and Webb City, Mo. (See Machinery Wanted—Cold-storage Plants.)

Mo., Webb City.—Joplin Hay Co. of Joplin, Mo. (address for this installation Box 342, Webb City) contemplates erection and equipment of cold-storage plant for produce-house. See Mo., Joplin. (See Machinery Wanted—Cold-storage Plants.)

Tex., El Paso.—El Paso Ice & Refrigerating Co. increased capital from \$100,000 to \$150,000.

IRON AND STEEL PLANTS

Md., Sparrows Point.—Iron Furnaces, Steel Mills, etc.—Bethlehem Steel Corp., South Bethlehem, Pa., reviewing construction in progress, additional plants contracted for, etc., announces: Four 500-ton blast furnaces contracted for, and all auxiliaries, including new casting machine, gas washers, etc., under way; to supply coke for these furnaces, 4 batteries of 60 ovens each of Koppers ovens contracted for, complete with by-product plant; ovens, 13½ tons capacity; in connection with coke ovens an elaborate system of coal unloading, handling, crushing, mixing, etc., has been ordered for installation during next year or 18 months; ore dock serving furnace plant will be ex-

C. W. Geraty, V.P.; D. G. Towles, Secy.-Treas.; W. F. Caw, Gen. Mgr.

LUMBER MANUFACTURING

Ala., Pinebelt.—Pine Belt Lumber Co., B. McClanahan, Hattiesburg, Miss., Pres., and W. P. Powers, Mgr., will rebuild plant noted (under Ala., Orrville) burned in Nov.; erect 32x100-ft. ordinary mill construction building; construction by the company; daily capacity 50,000 ft. lumber.

Ark., De Queen.—Missouri Lumber Co., capital \$10,000, inceptd. by M. M. Riner, Chas. Iddolls and J. C. Blevins.

Ark., Howell.—Kelley Lumber Co., Searcy, Ark., will rebuild plant lately burned; 150x50 ft. wood building; install machinery for daily output 20,000 ft. hardwood; J. A. Reynolds, Archt. and Constr. Engr. (Lately noted.)

Ga., Hawkinsville.—Standard Lumber Co. organized R. F. Thies, Pres., and C. E. Baumgardner, Mgr.; acquired mill formerly owned by Timber Products Co.; plant fully equipped; daily capacity 35,000 ft. hardwood and pine lumber. (Lately noted inceptd. with \$25,000 capital.)

Ky., Hyden.—J. B. Hoge and others of Hazard, Ky., are reported as purchasing timber and coal lands on Middle Fork of Kentucky River, Leslie County, and to develop.

La., Leesville.—Nona Mills Co. let contract to Knapp & East, Lake Charles, La., to erect 2-story brick building; 40x50 ft.; cost \$10,000; F. W. Steinman, Archt., Beaumont, Tex.

Miss., Issaquena.—Issaquena Lumber Co. will rebuild mill reported burned.

S. C., Charleston.—Nashville Lumber Co., capital \$15,000, inceptd. by B. A. Hagood and A. R. Young.

Tenn., Jacksboro.—Maples Lumber Co., Knoxville, Tenn., purchased 2200 acres timber land estimated to contain 14,000,000 ft. white oak and poplar timber; will build mills.

Tenn., Johnson City.—Tennessee Lumber & Veneer Corp. advises Manufacturers Record concerning lately-noted loss by fire: Veneer department, comprising about ¼ of buildings, destroyed; panel and flooring departments are in full operation; already having surplus room, will re-erect only iron-clad sawmill building; construction by company force; purchase rebuilt machines, including band and veneer sawmills, and veneer slicer, dryer, lathe and clippers. (See Machinery Wanted—Woodworking (Veneer) Machinery.)

Tex., Voth.—Keith Lumber Co. will rebuild mill reported burned at \$100,000 loss.

Va., Nora.—McCorkle Lumber Co., capital \$50,000, inceptd.; M. C. McCorkle, Pres.; M. R. McCorkle, Secy.-Treas.; both of Big Stone Gap, Va.

W. Va., Bablin.—Holt Lumber Co., Chas. Holt, Mgr., Elkins, W. Va., purchased timber lands estimated to contain 50,000,000 ft. hardwood timber; will develop. (Lately noted inceptd. with \$250,000 capital.)

METAL-WORKING PLANTS

N. C., High Point.—Chains.—W. D. Simmons and T. M. Jarrell may install machinery for manufacturing special light chains. (See Machinery Wanted—Chain Machinery.)

Va., Norfolk.—Chains.—American Chain Co. of Bridgeport, Conn., and other cities, will build plant; 6 units; ordered special machinery costing \$150,000 to include testing machine of 2,000,000 lbs. capacity; plant cost \$300,000 to \$500,000.

Va., Virginia Beach.—Nut Cracker.—Cyrus Marsh contemplates production of patented nut crackers; may place order for manufacture. (See Machinery Wanted—Nut Cracker Manufacture.)

MINING

Ala., Ashland.—Graphite.—Empire Graphite Co., capital \$100,000, inceptd.; plans to develop graphite and mica land; F. J. Ingram, Pres.; E. J. Garrison, V.P.; A. A. Northen (Pres. First National Bank of Ashland), Secy.-Treas.

Ala., Birmingham.—Graphite.—Alex. McIntyre, 1426 Phelan St., interested in proposed construction of \$35,000 graphite plant. (See Machinery Wanted—Graphite Plant.)

Ala., Clanton.—Graphite.—Flaketown Graphite Co. will install additional machinery to increase output.

Ala., Gadsden.—Iron.—Jarima Ore Co. organized by Eugene Weil and Chas. Scott;

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

purchased Alabama Iron & Steel Co. property and will develop iron mines.

Ala., Lineville—Graphite.—Great Southern Graphite Co., 42 Jefferson County Bank Bldg., Birmingham, Ala. (lately noted increasing capital from \$25,000 to \$300,000) will develop 78 acres; daily capacity 300 tons; install complete equipment; A. W. Carr, Gen. Supt.; E. B. Van Kuren, 1339 Jefferson County Bank Bldg., Birmingham, Constr. Engr. (See Machinery Wanted—Mining (Graphite) (Machinery).)

Ark., Montana—Lead and Zinc.—Pennsylvania Mining Co. will sink shaft for additional mine; has ordered machinery equipment.

Ark., Omaha—Lead and Zinc.—Joe Spradlin of Pinetop, Ark., are reported as to develop lead and zinc property and build mill.

Ga., Holton—Crushed Stone.—A. T. Small Quarries Co., Georgia Casualty Bldg., Macon, lately noted inceptd., capital \$75,000, succeeds Preston-Small Construction Co.; advises Manufacturers Record: To increase capacity has purchased additional equipment, including jaw crusher and gyratory crusher; will build new steam-operated plant, nearer quarry (at Holton); cost of new developments about \$175,000; will use 100-ton steam shovel, dump cars and dinky engines; build about 5½ mi. spur track; daily output 2000 tons 2½ to ¾-in. crushed stone; develop 90 acres.

Mo., Joplin—Lead and Zinc.—Lindsey Lead & Zinc Co., capital \$50,000, inceptd. by Jacob Dick, C. B. Lee and W. S. Pate.

Mo., Reeds—Lead and Zinc.—United States Smelting Co., Joplin, plans to construct concentrating mill.

Mo., Webb City—Zinc.—Osage Zinc Co. (in Nov. noted inceptd., capital \$30,000) organized; C. J. Hill, Pres.; J. W. Ellis, V.-P.; E. E. Fugitt, Secy., Treas. and Mgr.; A. Bettis, Constr. Engr.; develop 20 acres; has let contract for erection of concentrating plant, also mainly for equipment; cost of plant about \$18,000. (See Machinery Wanted—Mining (Zinc) Machinery, etc.)

Okla., Commerce—Lead and Zinc.—S. D. Frod, Lon Newton, Tom Hadley and others organized mining company, leased 40 acres mining land and contemplate development.

Okla., Quapah.—L. C. Church, Miami, Okla., leased 200 acres mining land and plans development.

Okla., Tulsa.—Missouri Mule Mining Co. chartered by F. E. Millner and others, all of Miami, Okla.

Okla., Nowata—Lead and Zinc.—Sedalia-Lebanon-Nowata Lead & Zinc Co. chartered with \$100,000 capital by A. C. Hough of Nowata, L. C. Mayfield of Lebanon, Mo., and J. W. Palmer of Sedalia, Mo.

Va., Danville—Gold.—S. C. Taylor will, it is reported, develop gold mine.

Va., Norfolk—Gravel and Sand.—Arundel Sand & Gravel Co., Jos. J. Hock, V.-P. and Gen. Mgr., Pier 2 Pratt St., Baltimore, advises Manufacturers Record: Acquired Virginia Sand & Gravel Co. plant on Jan. 1; land, wharf property and floating equipment; use present plant and furnish all additional plant from Baltimore; not ready to state information relative to improvement contemplated.

W. Va., Martinsburg—Limestone.—Martinsburg Limestone Co., capital \$300,000, inceptd. by Stuart W. Walker of Martinsburg, Clarence L. Leadslee and W. W. Jackson of Williamsport, Pa., and others.

MISCELLANEOUS CONSTRUCTION

Fla., Jacksonville—Quay Wall.—Commodore Point Terminal Co. let contract to F. W. Long & Co., Jacksonville, to construct 5164 lin. ft. concrete quay wall along its St. John's river terminals; Herbert J. Mendenhall, Jacksonville, Engr.

Fla., St. Petersburg—Pier, Etc.—City votes Feb. 16 on issuing \$2500 bonds for improvements to pier; also on \$50,000 bonds for fill and seawall. Address The Mayor.

Ga., Savannah—Dredging.—Savannah Sugar Refinery Corp. is considering plans to dredge Savannah River from head of Kings Island to refinery from depth of 18 ft. to 21 ft.; cost \$25,000 to \$35,000.

Md., Baltimore—Steamship Pier.—Baltimore & Ohio R. R. will complete No. 6 Pier by July, 1917; R. N. Begien, Ch. Engr., Baltimore, advises Manufacturers Record: Pier 1000 ft. in length by 150 ft. wide; 2 stories high; pile foundation cut off at water line; 3 piles are capped, decked and floored; on outside are concrete walls to retain filling placed on top of flooring; first floor running surface is concrete; building above first floor level is steel, with wood running surface for

second floor; 2 tracks inside of building. Other facts, lately stated, are: Edw. Brady & Son, Contrs., Cathedral and Howard Sts., Baltimore, for superstructure costing about \$450,000; American Bridge Co., 30 Church St., New York, to furnish structural steel; Trussed Concrete Steel Co., Detroit, to furnish steel sash, wire lath and metal lumber; Valle & Young, Baltimore, to furnish sheet-metal work. (Heretofore noted.)

Md., Baltimore—Breakwater.—H. K. McCay, Harbor Engr., submitted plans for breakwater at Fort McHenry to afford safe harbor for boat clubs; 1750 ft. long; concrete walkway 6 ft. wide; pergola or band stand at end.

Mo., Kansas City—Heating Plant.—Kansas City Light & Power Co. let contract E. L. Winn Construction Co., 105 Railway Exchange Bldg., Kansas City, at about \$46,000 to erect 1-story building for heating plant. (Lately noted.)

Tex., Houston—Wharf.—Sun Oil Co. is having plans prepared for wharf to be erected (on ship channel) for loading oil on tankers for shipment to Sabine Pass and other points from Goose Creek field; cost \$10,000; also proposes construction of pipe line to wharf from Goose Creek field, to cost \$40,000.

Tex., Port Aransas—Jetty Repairs.—Gov. ernment will repair jetty; bids at U. S. Engr.'s office, Galveston, until Jan. 24. (See Machinery Wanted—Jetty Repairs.)

MISCELLANEOUS ENTERPRISES

Ala., Anniston—Abattoir.—Anniston Hide & Tallow Co. will build abattoir.

Ala., Birmingham—Cleaning.—Germicide Oriental Cleaning Co., capital \$5000, inceptd.; Virginia Shugart, Pres.; F. W. Shugart, V.-P.; C. S. Shugart, Secy.-Treas.

Ark., Siloam Springs—Publishing.—International Federation Publishing Co., capital \$25,000, inceptd. by T. B. Price, H. B. DeLaye, W. E. Lindsay and others.

Ga., Augusta—Publishing.—Augusta Herald, Bowdre Phinizy, Pres., purchased 90-ft.-front site on Broad St.; will erect fireproof building after plans by G. Lloyd Preacher, Augusta; probably 4 stores on first floor, offices on second, and bachelor apartments on third and fourth floors; brick, granite and concrete materials.

Mo., St. Louis—Publishing.—Medicine & Surgery Pub. Co., chartered by Philip Skramka and others.

N. C., Asheville—Advertising.—United Advertising Co., capital \$100,000, inceptd. by W. C. Hammond, E. A. Wells and W. C. Hammer.

N. C., Charlotte—Engineering.—Blair & Draine chartered with \$5000 capital by Brent S. Drane, Holmes Blair and Wilbur W. Smith.

Okla., Commerce—Laundry.—W. H. Walker will build steam laundry.

Okla., McAlester—Laundry.—McAlester Laundry Co. chartered by F. J. McFarland and others.

Okla., Nowata—Laundry.—A. F. Snodgrass contemplates erecting laundry.

Tex., Austin—Laundry.—State Lunatic Asylum, D. H. Folts, Pres. of Board, has not decided on plans for rebuilding lately-noted laundry; will erect fireproof structure; plans by C. H. Page & Bro., Austin; has let contract for machinery, cost \$18,000.

Tex., Houston—Optical.—Merry Optical Co., capital \$30,000, inceptd. by C. L. Merry, Fred C. Merry and C. N. Shelden.

Tex., El Paso—Cleaning Plant.—Wrights Cleaning Works purchased \$3500 site on which to build plant.

Tex., Fort Worth—Plastering.—Southwestern Plastering Co. chartered with \$10,000 capital by C. J. Sutton, D. R. Weaver and J. W. Williamson.

Tex., Sherman—Grain Elevator.—Phoenix Public Elevators, capital stock \$100,000, organized; Ben F. Smith, Mgr.; will erect reinforced steel and concrete elevator; cost \$80,000; storage capacity 300,000 to 500,000 bu. grain.

Tex., Tuleta—Hay Curing, etc.—Tuleta Mercantile Co. contemplates erection of drier for curing hay, drying sweet potatoes, beans, etc. (See Machinery Wanted—Kiln (Dry).)

Va., Clifton Forge—Contracting.—Carpenter, Major Bros. & Co., capital \$50,000, inceptd.; J. C. Carpenter, Jr., Pres.; J. L. Harris, Secy.-Treas.

Va., Eagle Rock—Hardware.—The Hardware, capital \$50,000, inceptd.; John D. Myers, Pres.; M. R. Morgan, Secy.

Va., Richmond—Printing.—Cussons-May & Co., Glen Allen, Va., will build plant for printing and for manufacturing calendars, labels, blotters, etc.; erect 3-story 84x50½-ft. mill-construction building costing \$17,000; Delaney & Gann, Contrs., 1915 Grove Ave., Richmond; Carneal & Johnson, Archts., Richmond. (Lately noted.)

Va., Staunton—Printing.—Staunton Daily News will rebuild printing plant and offices noted burned at \$8000 loss.

W. Va., Beckley—Publishing.—Co-operative Publishing Co., Box 256, organized; H. M. Houchen, Pres.; E. L. Webb, V.-P.; R. W. Smith, Secy.-Mgr.; open bids Apr. 1 on fireproof building; plans undecided. (See Machinery Wanted—Printing Machinery.)

W. Va., Wheeling—Florist.—Spragg Floral Co. chartered with \$5000 capital by S. L. Spragg and others.

MISCELLANEOUS FACTORIES

Ala., Alexander City—Overalls.—John T. Worthy contemplates establishment of overall factory. (See Machinery Wanted—Overall Machinery.)

Ala., Birmingham—Bread.—Birmingham Bread Co. changed name to Magnolia Baking Co. and increased capital from \$10,000 to \$35,000.

Ala., Mobile—Turpentine.—Taloco Turpentine Co., capital \$5000, inceptd.; H. C. Taylor, Pres.; R. B. Crum, V.-P.; Jas. W. Gray, Secy.-Treas.

Ala., Mobile—Marine Ways.—Harrison Bros. leased 500 front feet of river property on which to build marine ways estimated to cost \$75,000; size and capacity not fully determined, but according to blue prints submitted to U. S. Engr.'s office, plant will comprise 3 ways of 200, 300 and 600 tons each, or aggregate capacity of 1500 tons.

Ala., Montgomery—Skirts, etc.—Montala Skirt & Blouse Mfg. Co., capital \$20,000, inceptd. to manufacture middie blouses, skirts and aprons; initial installation, 25 electric machines; Bennie Friedman, Pres.; S. Zadek, V.-P.; J. A. Zadek, Secy.-Treas.; Wm. Norbit, Gen. Mgr.

Ala., Montgomery—Cigars.—Dixie Cigar Co. chartered with R. H. Williams, Pres.-Mgr.

Ark., Fort Smith—Window Glass.—Ideal Glass Co. of West Union, W. Va., will establish plant to manufacture window glass.

Ga., Columbus—Peanuts.—I. H. Pitts & Sons Co. plans to establish peanut factory; later add feed and grist mill; invest \$20,000.

Ga., Moultrie—Serum.—Georgia Serum Co. will double capacity for manufacturing hog cholera serum.

Ky., Carrollton—Bottling.—Coca-Cola Bottling Works organized; F. S. Schmidt, Louisville, Ky., Pres.; J. Willock, Campbellville, Ky., V.-P.; E. W. Willock, Secy.-Treas.; install bottling machinery, cost about \$5000 in rented building. (Lately noted inceptd.)

Ky., Louisville—Aquarelles.—Southern Aquarelle Mfg. Co. chartered with \$10,000 capital by W. W. Klein and H. M. Peckinpaugh of Louisville and J. L. O'Bannon of Corydon, Ind.

Md., Baltimore—Oxygen.—Cram Engineering Co. contemplates installing oxygen manufacturing plants in central and far south. (See Machinery Wanted—Bricks.)

Md., Baltimore—Skirts.—Jos. F. Hoffman leased space at northeast corner Hanover and German Sts.; will establish ladies' skirt factory.

Md., Baltimore—Dust Collector, etc.—Dixie Mfg. Co., Russell and Stockholm Sts., will build 2 brick constructions, 60x100 ft., to factory for dust collectors, blow piping, exhaust piping, etc.; let contract to Consolidated Engineering Co., Calvert Bldg., Baltimore; MacNeil & MacNeil, Archts., Union Trust Bldg., Washington.

Md., Baltimore—Shirtwaists.—Winternitz & Wilfson leased space at 10 S. Hanover St.; will establish shirtwaist factory.

Md., Cumberland—Candy.—United Candy Co., Wm. D. Rohrer, Mgr., changed name to United Candy Mfg. Co.; leased 4-story brick building in rear of present building on Commerce St.; will remodel and equip for candy factory.

Md., Fairfield—Shipbuilding.—Arundel Ship Building Co., organized with main office at Fairfield; Frank A. Furst, Pres.; Jos. J. Hock, V.-P.; W. Bladen Lowndes, Secy.-Treas.; each holding same offices with Arundel Sand & Gravel Co., Pier 2 Pratt St., Baltimore; new company's capitalization is \$500,000 stock and \$500,000 bonds; at present issue \$225,000 stock and \$300,000 bonds. (Lately noted under Baltimore as to buy Coastwise

Shipbuilding Co.'s repair plant, increase facilities, construct and repair wooden vessels, etc.)

Md., Fairfield—Shipbuilding.—Arundel Ship Building Co., organized with main office at Fairfield; Frank A. Furst, Pres.; Jos. J. Hock, V.-P.; W. Bladen Lowndes, Secy.-Treas.; each holding same offices with Arundel Sand & Gravel Co., Pier 2 Pratt St., Baltimore; new company's capitalization is \$500,000 stock and \$500,000 bonds; at present issue \$225,000 stock and \$300,000 bonds. Purchased shipyards and plant of Arundel Sand & Gravel Co.; will repair and build vessels. (Lately noted.)

Mo., Carl Junction—Dairy and Dairy Products.—Twin Grove Dairy & Products Co. inceptd. by P. E. Donnell, L. D. Gates and F. F. Ross.

Mo., Kansas City—Chemicals and Disinfectants.—Sanitary Engineering & Mfg. Co., capital \$25,000, inceptd. by F. R. Megan, Sam B. Strother and Wm. T. Campbell.

Okla., Oklahoma City—Laboratory.—Moco Laboratories, capital \$50,000, inceptd. by Tony I. Mess, Wilson H. Williams and Hal W. Clarke.

S. C., Columbia—Storage Batteries.—Storage Battery & Electric Co., capital \$10,000, inceptd.; will operate storage reforming station, build and rebuild storage batteries, operate electrical service station, etc.; R. C. McCreight, Pres. and Gen. Mgr.; L. L. Bultman, Secy.-Treas.; Geo. Koennecke, foreman of Battery Dept.

S. C., Greenwood—Ice Cream.—Greenwood Ice Cream Co., capital \$4000, inceptd. by J. H. Price, H. V. K. Schroder and J. C. Cotthran.

S. C., Spartanburg—Signs.—Merchant Sign Co. chartered with \$20,000 capital; Otto Grass, Pres.-Treas.; M. Moss, V.-P.; John L. Martin, Secy.

Tenn., Chattanooga—Paint.—Lookout Paint Co. will rebuild plant reported burned at loss of \$100,000.

Tenn., Chattanooga—Bottling.—Chattanooga Chero-Cola Bottling Co., capital \$40,000, inceptd. by J. L. Edmondson, C. D. Little, J. Y. Bruce and others.

Tenn., Nashville—Food.—Nashville Health Food Co., capital \$5000, inceptd. by Jethro Kloss, Amy Kloss, Ora R. Staines, Chas. O. Franz and others.

Tex., Corsicana—Ice-cream Cones.—Wilson Produce Co. may install machinery for manufacturing ice-cream cones. (See Machinery Wanted—Cone Equipment.)

Tex., Orange—Paper.—Yellow Pine Paper Mill Co. increased capital from \$500,000 to \$1,000,000.

Va., Covington—Fiber Leggings.—Universal Fastener & Legging Corp., lately noted chartered, capital \$60,000, advises Manufacturers Record: Will locate plant partly in Covington, partly in Pennsylvania; manufacture fiber leggings, with patent metal fastener; install steel molds, also dies; building plans not decided; C. E. Rogers, Pres.; W. H. McCouhlay, V.-P.; H. M. McAllister, Secy.

Va., LaCrosse—Bottling.—Queen Cola Bottling Co., capital \$10,000, inceptd.; L. M. Raney, Pres.; H. D. Barham, Secy.-Treas.

Va., Leesburg—Physician's Specialties.—Thompson-Plaster Co. succeeds Physician Specialty Co.; manufactures cabinet and other specialties for physicians; H. A. Thompson, Pres. (Lately noted inceptd. with \$100,000.)

W. Va., Huntington—Puncture Plugs.—Hill Puncture Plug Co., capital \$10,000, inceptd. by C. F. Lowther, G. A. Dils, L. H. Commack and C. M. Honaker.

W. Va., Huntington—Tires and Rubber.—Huntington Tire & Rubber Co. let contract P. S. Hines & Son of Huntington to erect plant building; 2 stories; 49x120 ft.

MOTOR CARS, GARAGES, TIRES, ETC.

Fla., Hastings—Garage.—W. C. Gunn will erect garage; 30x60 ft.; install repair shop.

Fla., Tarpon Springs—Garage.—Newton Coler will build 82x60-ft. garage.

Ga., Lagrange—Garage.—C. W. Smith & Son will occupy 1-story brick structure costing \$10,000 to be erected by Lagrange Savings Bank.

Ky., Lexington—Automobiles.—Two State Motor Co., capital \$10,000, inceptd. by J. W. Crutcher, A. V. Combs and Nellie Combs.

La., Oakdale—Automobiles.—Goff Motor Co. chartered with \$3000 capital; M. C. Goff, Pres.

Md., Baltimore—Garage.—Apartment Garage Co., Moses Solomon, Prop., Bayard and Nanticoke Sts., will erect lately-noted garage of brick and cement; 48x104 ft.; cost \$30,000;

steam heat. (See Machinery Wanted—Heating Plant.)

Mo., Baltimore.—Motor Cooling.—Motor Cooling Systems Co. organized with offices at 407 Munsey Bldg.; N. M. LaPorte, Pres.; C. F. New, V.-P.; W. H. Cook, Secy.; manufacture motor cooling systems and other automobile accessories; not decided as to cost, etc., of buildings; install machinery for light sheet and tube working. (Lately noted inceptd. with \$750,000 capitalization.)

Mo., Kansas City.—Automobiles.—Maxwell Motor Co., Detroit, Mich., let contract C. L. Gray Construction Co. of Kansas City to build motor car assembling plant, 800x125 ft., 4 stories; annual capacity, 12,000 cars; building cost \$200,000. (Noted in Oct.)

N. C., Charlotte.—Automobiles.—Burwell Walker Co., capital \$250,000, inceptd. by A. Burwell, J. O. Walker and E. H. McClelland.

Okla., Checotah.—Garage.—McKinney & Shields will erect brick garage.

Okla., Chickasha.—Garage.—Ford Motor Co., J. P. Wolverton, Agt., will build 65x50-ft. 3-story brick garage costing \$12,000; Cowan & Green, Contrs., Chickasha.

Okla., Miami.—Automobiles.—Commerce Motor & Supply Co. chartered with \$100,000 capital by Lon Edwards and others.

N. C., Washington.—Repairs.—E. W. A. Woodard will enlarge shop for automobile and general repairs. (See Machinery Wanted—Welding Electrical Machinery.)

S. C., Charleston.—Automobiles.—Charleston Auto Livery Co., capital \$5000, inceptd. by Wm. Keach and W. W. Leitch.

S. C., Manning.—Automobiles.—Clarendon Motor Co., capital \$2000, inceptd. by J. C. Plowden and D. C. Shaw.

Tenn., Memphis.—Garage.—Southern Motor Car Co., S. H. Butler, Pres., Como, Miss., will build 200x75-ft. garage and salesroom costing \$16,000. (Lately noted chartered, etc.)

Tenn., Memphis.—Automobile Supplies.—Osburn Automobile Supply Co. will build 150x100x100-ft. 2-story brick and concrete structure costing \$27,000; let contract to J. H. Hollingsworth & Co.; Harker & Cairns, Archts.; both firms of Memphis.

Tenn., Nashville.—W. G. Simmons will erect garage at 914 Broadway; cost \$15,000.

Tenn., Nashville.—Tires.—Blackwood Tire Co., 914 Broadway, will erect tire station; reinforced concrete; 1 story and basement; 65x160 ft.; ceiling of main floor 22 ft. high; steel trusses supporting roof; skylights; electric lighting; entire first floor for service station and vulcanizing room; capacity for 36 cars; cost \$25,000; Marr & Holman, Archts., Nashville; J. W. Patrick & Co., Gen. Contrs., Nashville.

Tex., Denison.—Garage.—H. E. Pearce and Wm. J. Scott will build 2-story and basement garage costing \$20,000.

Tex., Hillsboro.—Automobiles.—Satterfield Motor Co., capital \$5000, inceptd. by C. F. Graham, W. I. Satterfield and R. L. Utley.

Va., Graham.—Garage.—C. A. Nelkirk and H. S. Lefler will build garage.

ROAD AND STREET WORK

Ark., Texarkana.—City let contract to Burke Bros. Paving Co., Fort Smith, Ark., for Dist. No. 20 street paving. (Lately invited bids.)

Ark., Walnut Ridge.—Lawrence County, J. G. Richardson, Secy., will construct 30 mi. rock road; \$100,000 available; date of opening bids not set; F. A. Pritchett, Engr. Lately noted. (See Machinery Wanted—Road Construction.)

D. C., Washington.—City let contract to G. B. Mullin Co., Washington, at \$28,410 for grading necessary for extending 16th St. from Montague St. to Alaska Ave. (Lately invited bids.)

Fla., St. Petersburg.—City votes Feb. 16 on \$4000 bonds for brick paving. Address The Mayor.

Ky., Barbourville.—Knox County will grade earth crowned roads from fork of road near Cemetery to River bridge above Artemus, Ky.; from fork of road at Old Flatlick to mouth of Road Fork of Stinking Creek; from corporate limits of Barbourville to mouth of Heltons Fork on Indian Creek; total about 15 mi.; bids until Jan. 6; Read P. Black, Clerk County Commrs. (See Road Construction.)

Ky., Hellier.—City is reported to expend \$5,000 on street improvements. Address The Mayor.

Ky., Hazard.—City will lay curb, gutters and sidewalks on several streets; cost \$50,000. Address The Mayor.

Ky., Jenkins.—City will improve streets; cost \$40,000; soon invite bids. Address The Mayor.

Ky., Pikeville.—Pike County is reported to improve roads surrounding city and between Pikeville and Prestonburg; cost \$200,000. Address County Judge Stallard, Pikeville.

Ky., Wickliffe.—Ballard County Commrs. will let contract in spring to construct 23 mi. gravel roads; cost \$74,000; G. O. Johnson, County Clerk.

La., Monroe.—Ouachita Parish Police Jury let contract to Womack Construction Co., Sherman, Tex., at \$205,817 for road construction in two districts. (Lately invited bids.)

La., Oberlin.—Allen Parish, Road Dist. No. 2, will vote on \$750,000 bonds to construct roads and bridges; C. Lindsay, Secy. Police Jury.

Md., Baltimore.—City, R. M. Cooksey, Highway Engr., let contract to Silinguff-Browne Co., 1405 Munsey Bldg., Baltimore, to construct about 30,000 sq. ft. cement concrete sidewalks; \$5000 available; Chas. Sellmann McCollum, Engr., City Hall. (Lately invited bids.)

Md., Baltimore.—Board of Awards has plans and specifications for constructing third section of Key Highway and intersecting streets; also for reinforced-concrete bridge at Fort Ave.; divided as follows: Grading, reinforced-concrete bridge, paving streets and constructing municipal railroad; grading amounts to 135,000 cu. yds.; bridge 80 ft. long by 70 ft. wide, having 2 spans of 40 feet each and abutments; 28,000 cu. yds. sheet asphalt and 5000 cu. yds. granite paving; specifications, etc., at office Harbor Board, H. K. McCay, Harbor Engr., Broadway Pier, and obtainable for \$10; bids until Jan. 10. (See Machinery Wanted—Paving, etc.)

Miss., New Augusta.—Perry County voted \$200,000 bonds to construct roads. Address County Commrs.

Miss., Wiggins.—City let contract to Hattiesburg company to lay 1 mi. concrete sidewalk on Front and Pine Sts. Address The Mayor.

Okla., Ardmore.—Ardmore Oil Fields Transportation Co. retained Julian C. Field & Co., 105 Field Bldg., Denison, Tex., to survey and report on 40-mi. toll highway from Ardmore, northwest to Healdton and Fox oil fields. (In Nov. the road noted as to be of macadam base, with native rock asphalt surface.)

Okla., Drumright.—City let contract to Municipal Engineering & Construction Co. for extensive street paving, etc.; brick surface on 5-in. layer of concrete.

Okla., Eufaula.—McIntosh County Commrs. let contract Price & Summers, Checotah, Okla., at \$5857 to grade and fill Jefferson highway; about 10 mi.

Okla., McAlester.—City let contract to Jacob Kierdorf for constructing 15,644 sq. ft. sidewalk. (Lately invited bids.)

Okla., Sapulpa.—City Commrs. let contract John E. Nolan at \$14,000 to pave Mission and Hobson Sts.; concrete base; asphalt surface.

Tex., Brownwood.—Brown County Commrs. let contract N. A. Dawson, San Antonio, at about \$100,000 to construct roads.

Tex., El Paso.—City voted \$40,000 bonds for street improvements. Tom Lea, Mayor. (Lately noted to vote.)

Tex., Hallettsville.—Lavaca County, Dist. No. 1, let contract J. A. Coopwood, Shiner, Tex., at \$15,500 to construct 10 mi. gravel roads, near Yorkum; W. H. Koether, County Surveyor; Louis Wagener, County Commr., Shiner, Tex. (Lately noted inviting bids.)

Tex., Mount Pleasant.—City let contract General Construction Co., Fort Worth, at \$24,574 to grade, curb, gutter, clay and gravel 1 mi. of streets.

W. Va., Parsons.—Tucker County, Dry Fork Dist., H. F. Coleback, County Clk., voted \$60,000 bonds. (Lately noted for use as follows: \$10,000 for road from Red Creek P. O. to Hendricks; \$15,000, road from Red Creek P. O. to Jennings; \$9000, Lanesville Rd.; grading; remainder for hard-surfacing road from Randolph County line toward Parsons.)

W. Va., Parsons.—Tucker County, Fairfax Dist., H. F. Coleback, County Clk., voted \$150,000 bonds. (Lately noted for use on improvements to 5 sections road.)

W. Va., Welch.—McDowell County Commrs. let contract to T. Towles & Co. of Princeton, W. Va., Sam G. Walker of Welch and U. S. Tackett for 60 mi. of grading in Sandy River Dist.; let contract to Lutten Bridge Co., York, Pa., for 8 concrete bridges; let contract to Sam G. Walker for 5 iron bridges

with concrete floors; total of contracts, \$293,000. (Lately invited bids.)

W. Va., Wheeling.—Ohio County Commrs. let following contracts, aggregating \$70,000, for road improvements: Springer & Stringer, Fulton excavating, concrete foundation and curbing, and Jacovetti & Savage for paving and grouting; Cross & Meyer for paving and grouting Wheeling Park to Elm Park Rd., and Springer & Stringer for excavating, concrete base and curb; Springer & Stringer for paving through Elm Grove, and Miller, Ward & McCoy for paving and grouting.

SEWER CONSTRUCTION

Ark., Nashville.—City will construct sewer and water system; estimated cost \$91,000; Winters & Dove, Engrs., Fort Smith, Ark.

Ark., Texarkana.—City sewer mains relaying contract let by Burke Bros. Paving Co., Fort Smith, Ark., to McEachem & McEachem, McAlester, Okla. (See Road and Street Work.)

Fla., St. Petersburg.—City votes Feb. 16 on issuing \$30,000 bonds for septic sewer system. Address The Mayor.

Ky., Harlan.—City let contract to Hubbard Lumber Co., Harlan, for 2 mi. 4-in. to 24-in. sewer pipe. (See Machinery Wanted—Pipe (Sewer).)

Ky., Whitesburg.—City is considering construction of sewage-disposal plant. Address The Mayor.

Mo., Carl Junction.—City will soon invite bids to construct sewer system. A. W. McDowell, City Clerk. (Noted in Nov. to have voted \$20,000 bonds to construct sewer system, A. C. Moore, Frisco Bldg., Joplin, being engineer.)

Mo., Cartersville.—City is considering construction of district sewers. A. M. Baird, City Clerk.

Mo., Mexico.—City is considering installation of septic tanks. Wallace Dearing, City Clerk.

Okla., Drumright.—City will vote on \$25,000 bonds to construct sewers and culverts. Address The Mayor.

Tex., Columbus.—City contemplates installing sewage-disposal plant; invites plans. Address The Mayor.

Tex., El Paso.—City voted \$40,000 bonds for sewer extensions and \$100,000 for installing septic tanks; also \$75,000 to install drainage system for water from foothills; Tom Lea, Mayor. (Lately noted to vote.)

Tex., Forney.—City has plans by Myers & Noyes, Dallas, for additional treatment of sewage-disposal at local plant.

Tex., Georgetown.—Georgetown Sewer Co., F. E. Buchan, Mgr., contemplates improvements.

TELEPHONE SYSTEMS

La., Bogalusa.—Cumberland Telephone Co. plans to erect exchange and office building.

Okla., Asher.—Timber Hill Telephone Co., capital \$10,000, inceptd. by W. J. Ryan and J. C. Harrish of Wanette, Okla., and B. F. Phillips of Trousdale, Okla.

TEXTILE MILLS

Ga., Athens.—Cotton Yarn.—Princeton Mfg. Co. is not planning additions. (Recent report was an error.)

N. C., Lawndale.—Hosiery.—E. G. Morrison plans to build hosiery knitting mill. (See Machinery Wanted—Knitting Equipment.)

S. C., Bowling Green.—Cotton Yarn.—Reynolds Cotton Mills Co. has 104x60 ft. building costing \$12,000, equipped with 1900 spindles, etc., costing \$18,000. (Lately noted organized, etc.)

Tenn., Chattanooga.—Union Suits.—Lookout Knitting Mills organized; E. B. Thomason, Pres.; A. S. Revierie, V.-P.; E. M. Thomason, Secy.-Treas.; leased 140x60 ft. 3-story mill building and 50x30 ft. dye house, of concrete construction; install 12 knitting machines, sewing machines, electric power drive, etc., costing \$30,000; daily capacity 100 to 150 doz. men's union suits. (Previously noted inceptd., etc.)

WATER-WORKS

Ala., Decatur.—Alabama Water Co. increased capital to \$900,000.

Ark., Nashville.—City will construct water and sewer system; estimated cost \$91,000; Winters & Dove, Engrs., Fort Smith, Ark.

Ky., Auburn.—Town Trustees contemplate bond issue to construct water-works.

Ky., Hazard.—City contemplates improving water-works; cost \$20,000. Address The Mayor.

Ky., Scottsville.—City is having surveys made for water-works; Knight & Quayle, Engrs., Chattanooga.

Mo., Carrollton.—City Water & Light Co. contemplates improvements.

Mo., Clarence.—City is considering construction of water-works; E. W. Ragland, City Clerk.

N. C., Hickory.—City, John W. Ballew, City Mgr., will improve water-works; install two 250-gal. centrifugal electrically-operated pumps; also filter.

Okla., Drumright.—City will vote on \$43,000 bonds to extend water-works. Address The Mayor.

Okla., Forgan.—City contemplates extending water-works. Address The Mayor.

Okla., Checotah.—City, A. O. Johnson, Mayor, will expend \$120,000 to extend water-works; vote on bonds.

Okla., Gate.—City contemplates voting on bonds to construct water-works. Address The Mayor.

Okla., Stroud.—City let contract Chicago Bridge & Iron Co., 105th and Throop Sts., Chicago, at \$30,000 to improve water-works and electric plants; Benham Engineering Co., Engr., Colcord Bldg., Oklahoma City; W. A. Hadley, city official. (Lately noted inviting bids for improvements to include 75,000-gal. tank on 100-ft. tower and 30x30-ft. concrete storage, additional water mains, 75 K. W. generator, 250 G. P. M. pumping plant, brick addition to power-house, Diesel oil engine, alternating generator, etc.)

Okla., Temple.—City contemplates voting on bonds to construct water-works. Address The Mayor.

WOODWORKING PLANTS

Ga., Dahlonega.—Handles, Spokes, etc.—Wiley Barlowe interested in proposed establishment of factory for hickory cant hook handles, white oak spokes, breast yokes, singletrees and spike maul, clay mattock, hammer handles, etc.

Miss., Charleston.—Cooperage.—Charleston Cooperage Co., capital \$50,000, inceptd. by G. E. Lamb and W. B. Burke of Charleston, A. E. Diamant of Boyle, Miss., and others.

Miss., Vicksburg.—Cooperage.—Dixie Cooperage Co. (O. K. Trook of Indianapolis, Ind.; John E. Osborne, and others of Greensburg, Ind.) will build plant; purchased 10-acre site; plans daily capacity 75,000 coiled elm hoops for barrels. (Lately noted.)

N. C., Fayetteville.—Caskets, etc.—Mutual Casket & Coffin Factory will be name of company lately noted organized, J. C. Scarborough, Pres., to establish plant; open bids about Feb. 1 on 50x160-ft. 2-story main building; cost about \$3000; plans by Wm. Stephens, Box 919, Greensboro, N. C.; install woodworking and sewing machines, cost \$5000; manufacture caskets and general funeral supplies; A. L. Garrett, Secy., address until Jan. 15, Greensboro, N. C.; open machinery bids about Feb. 1. (See Machinery Wanted—Woodworking Machinery, etc.)

N. C., Tabor.—Toothpicks.—L. Baggett is interested in proposed installation of toothpick plant. (See Machinery Wanted—Toothpick Machinery.)

Tex., Houston.—Cypress Tanks.—Parkersburg Tank Co., 719 Washington St., will establish cypress tank factory; occupy 100x50-ft. building of corrugated iron; install dado and cut-off saws, 20 H. P. electric motor, etc. (Lately noted.)

FIRE DAMAGE

Ala., Eufaula.—H. T. Johnson's residence; loss \$5000.

Ark., Center Point.—Duckett Whitmore's house and barn; loss \$3000.

Ark., Conway.—Walter Terry's residence, owned by Mrs. Jos. Frauenthal; loss \$7000.

Ark., Sheridan.—W. J. Shepherd & Son's building; loss \$10,000.

Ark., Yellville.—Sue Layton's residence; loss \$10,000.

Ga., Norman Park.—Norman Institute's water and light plant.

Ga., Maysville.—Southern Ry. Co.'s depot; B. Herman, Chief Engr. M. W. and S. Washington, D. C.

Ky., Central City.—Mayor C. W. Wells' hotel; R. B. Culbertson's 3 stores.

Ky., Clinton.—O. Pelper's residence, 2 mi. from Clinton; loss \$3000.

Ky., Hopkinsville.—J. B. Hawkins & Co.'s store; E. Tanner's store; loss \$11,000.

Md., Salisbury.—Henry Scott Brewington Bldg., owned by E. C. Brewington, 2333 Eutaw Place, Baltimore, Md.; Model Variety Store; Elks' Home and Ross House.

Miss., Blue Mountain.—Jennings and Hearn buildings of Blue Mountain College; loss \$25,000.

Miss., Issaquena.—Issaquena Lumber Co.'s mill.

Miss., Meridian.—Great Southern Hotel owned by John Kamper and leased by L. H. Arky estate; loss \$10,000 to \$30,000.

Mo., Butler.—Star Motion Picture Show, United Drug Co.'s store; loss \$25,000.

Mo., Milan.—Ed Slick's bakery; Leonard J. Dewitt's store; Emerald Theater; total loss \$40,000.

N. C., Brevard.—A. N. Jenkins & Co.'s store.

N. C., Henderson.—Two stores owned by Mrs. Erskine Clements and Mrs. Joel Cheatham; occupied by Candy Kitchen and Satterwhite Furniture Co.

N. C., Fayetteville.—St. Joseph's Episcopal Church's rectory, Sunday-school and parish school. Address The Rector.

N. C., Lexington.—Leasar Building; Foy & Shemwell's auto supply room; loss \$4000.

N. C., Stanfield.—Smith Bros.' livery stable; loss \$10,000.

N. C., Winston-Salem.—J. S. Owen's store and number of dwellings.

Okla., Grove.—Mode Mercantile Co.'s store; loss \$25,000.

S. C., Abbeville.—P. H. McCaslan's residence.

S. C., Laurens.—S. G. McDaniel's cotton gin; loss about \$6000.

S. C., North Augusta.—Hampton Terrace Hotel; loss \$600,000; owned by James U. Jackson, Augusta, and others.

S. C., Remini.—Booth-Parker Lumber Co.'s sawmill; loss \$1000.

S. C., Rock Hill.—Ratterree Bldg., occupied by Peter Elias & Bro., John Azer & Son, and others; loss several thousand dollars.

S. C., York.—Moore-McNeill Bldg., owned by Mrs. S. M. McNeill and B. C. Moore.

Tenn., Chattanooga.—Lookout Paint Mfg. Co.'s plant, loss \$100,000; Gilman Paint & Varnish Co.'s plant, loss \$20,000.

Tenn., Cleveland.—C. H. Hardwick's store; loss \$4000 to \$5000.

Tenn., Kingston.—Roane County High school. Address Dist. School Trustees.

Tenn., Knoxville.—M. M. Nelson's store building, occupied by G. W. Robertson; loss \$5000.

Tenn., Memphis.—Interstate Coopera

Co.'s plant, including 8 drykilns and 80,000 barrel headings; loss probably \$30,000.

Tenn., Selmer.—First National Bank Bldg.; loss \$7500.

Tex., Batesville.—Batesville Hotel, occupied by Ned Holmes.

Tex., Breckenridge.—H. W. Sayle's garage; Dodds' restaurant and John Black's store; loss \$8000.

Tex., Bryan.—Mrs. O. B. Love's residence.

Tex., Cameron.—Residence of William Cobb, editor and proprietor of Milam County Enterprise; loss \$5000.

Tex., Cleburne.—J. B. Boone's store; Mrs. Edna Dickinson's rooming-house at 712 N. Border St.; E. K. Shiner's building, occupied by Market Grocery Co.; total loss, \$6000.

Tex., Fort Stockton.—Frank S. Mills' residence.

Tex., Longview.—Graham Mfg. Co.'s box and crate factory; loss \$40,000.

Tex., Oak Forest.—Wade Gln; loss \$5000.

Tex., Sunset.—J. E. Tucker's 5 buildings; J. T. Finn & Son's building.

Tex., San Gabriel.—Hope Camp's residence, water, light and sewerage plant; loss \$5000.

Tex., Sonora.—H. P. Allison's residence; loss \$5000.

Tex., Stamford.—Stamford Creamery Co.'s plant; loss \$3500.

Tex., San Benito.—San Benito Ice & Pre-cooling Plant; loss \$50,000.

Tex., Wichita Falls.—Travis School under construction; loss \$15,000. Address Mayor Britain.

Tex., Willsboro.—Wright Drug Co.'s store; loss \$30,000.

Va., Charlottesville.—Albemarle Products Corp.'s cannery and office on Rose Hill; loss \$18,000.

Va., Kilmarnock.—Martin S. Strangefel-low's residence; loss \$4000.

Va., Staunton.—Staunton Daily News' plant and offices; loss \$8000.

Va., Staunton.—Mrs. Eugenia L. Robinson's residence; loss \$3000.

W. Va., Beckley.—Baptist Church; loss \$5000. Address The Pastor.

W. Va., Beegans.—New Pocahontas Coal Co.'s clubhouse; loss \$3500; W. D. Kiley, Prop.

DAMAGED BY STORM

Ark., Pine Bluff.—Joe H. Pilkington's residence, barn, silo and outhouses, 4 mi. from Pine Bluff.

BANK AND OFFICE

Fla., Jacksonville.—Atlantic National Bank, Edw. W. Lane, Prest., is having plans prepared for enlarging banking quarters; also contemplates providing clubrooms on roof for employees.

Ga., Hawkinsville.—Planters' Bank is reported to erect 3-story store and office building; stores on first floor; offices above.

La., Bogalusa.—First State Bank is considering erecting bank building; cost \$20,000.

La., New Orleans.—Julius Koch will erect business and office building. (See Stores.)

La., Shreveport.—J. Dambly is reported having plans prepared for store and office building. (See Stores.)

Okla., Healdton.—Kennett Hudson, Ardmore, Okla., will erect office building to be occupied by Jake L. Hamon.

Tenn., Memphis.—Columbia Mortgage & Trust Co. has plans by Mahan & Broadwell, Germania Bank Bldg., Memphis, for improvements to include remodeling front of building, installation of marble and stone stairway with ornamental panels in balustrade in bronze finish, windows, marquise, etc.

Tenn., Nashville.—W. S. Bransford will erect store and office building. (See Stores.)

CHURCHES

Ala., Birmingham.—West Woodlawn Methodist Church, Rev. Foster K. Gamble, Pastor, 4915 Fifth Ave., North, is having plans prepared by T. L. Brodie, Birmingham, for building; auditorium to seat 450; concrete foundation; brick walls; cost \$10,000, construction begins about May 1.

Ark., Foreman.—Methodist Church will erect building. Address The Pastor.

Ark., Hope.—Methodist Church, Rev. J. D. Scott, pastor, will erect building; R. N. Lagrone, Chrmn. Bldg. Com.

Fla., Arcadia.—Methodist Episcopal Church, South, D. G. Barnett, Secy.-Treas. Building Com., King Bldg., rejected all bids to erect building and will call for new bids; pressed brick; tile roof; cement and cork carpet floors; one-pipe steam heat; indirect electric lighting system; John Gaisford, Archt., Memphis, Tenn. (Lately noted.)

Fla., Tampa.—Hyde Park Presbyterian Church, Rev. J. C. R. Brown, Pastor, will probably let contract to Logan Bros., Tampa, to erect building; 45x90 ft.; brick; Sunday-school and church separated by rolling doors; Romanesque style; cost \$13,000; Francis J. Kennard, Archt., Tampa. (Lately noted.)

Ga., Dublin.—Henry Memorial Presbyterian Church, Rev. C. M. Chumbley, Pastor, 100 Johnson St., will erect church and Sunday-school building; brick; stone trimmings; roofing not determined; wood floors; hot-water or steam heat; city electric lights; cement sidewalks; cost \$20,000 to \$25,000. Address The Pastor. (Lately noted.)

Ky., Lexington.—Broadway Christian Church opens bids Jan. 12 to erect building; brick and stone; probably 3 stories and basement; 104x192 ft.; cost about \$100,000; Richards, McCarty & Bulford, Archts., Columbus, Ohio. Address Dr. J. C. Carrick, Lexington. (Noted in June.)

Ky., Myra.—Baptist Church will erect building; cost \$10,000; contract let Jan. 13. Address The Pastor.

La., Oubre.—Rev. J. B. Jeanmar, New Orleans, is interested in erecting church building; cost \$20,000.

Md., Baltimore.—Twenty-fifth Street Christian Church, Rev. B. H. Melton, Pastor, will erect \$30,000 building; construction expected to begin about March 1; other details not determined.

Md., Baltimore.—First English Lutheran Church, Lanvale and Fremont Sts., is having plans prepared by Blanke & Zink, 648 Equitable Bldg., Baltimore, for improvements to building, to include social hall in basement, entrance, etc.; cost \$5000.

Okla., Ada.—Presbyterian Church plans to erect building. Address The Pastor.

Okla., Bristow.—Methodist Church, South, Rev. W. L. Broom, Pastor, will erect building; cost \$12,000; construction begins in Jan.

Okla., Guthrie.—Christian Scientist Church contemplates erecting building. Address The Reader.

Okla., Sapulpa.—Christian Church has tentative plans for \$50,000 building. Address The Pastor.

Okla., Woodward.—First Baptist Church has plans by J. O. Parr, Oklahoma City, for building; 72x82 ft.; stone and face brick; cost \$23,000; R. F. Bourne, Secy. Bldg. Com.

Tex., Alice.—Catholic Church will erect brick building. Address The Pastor.

Tex., Belton.—Baptist Church will erect building. Address The Pastor.

Tex., Fort Worth.—Eastern Greek Orthodox Church will erect \$6000 building at 21st and Ross Aves. Address The Pastor.

Tex., Houston Heights.—Gracer Methodist Church has plans by A. Delisle, 704½ Main St., Houston, for parsonage; 2 stories; 8 rooms; frame; 30x43 ft.; mill construction; pine floors; cost \$3750.

Va., Norfolk.—Knox Presbyterian Church will erect Sunday-school addition; 15x60 ft.; frame; cost \$3000. Address E. A. Goehring, 500 W. 36th St., Norfolk. (Lately noted.)

W. Va., Beckley.—Baptist Church will erect building to replace structure noted damaged by fire. Address The Pastor.

W. Va., Parkersburg.—Dudley Avenue Baptist Church, Rev. Jno. D. Runkle, Pastor, 236 Dudley Ave., will erect building; auditorium to seat 500; pressed brick; tile roof; wood floors; steam heat; electric lights; cost \$20,000; date opening bids not determined. Address The Pastor as above.

CITY AND COUNTY

Ga., Macon.—Fair.—Georgia State Fair Assn. will expend \$10,000 for improvements at fair grounds to include stable of 50 stalls, 4 barns and automobile building.

Ga., Macon.—Library.—City will erect \$50,000 library to be known as Washington Public Library; Chas. R. Jenkins, Lewellen P. Hilyer, Eugene Anderson and others, Trustees.

La., Monroe.—Jail, etc.—Ouachita Parish Police Jury plans to erect courthouse and jail. (See Courthouses.)

Md., Baltimore.—Schools.—Board of Awards rescinded contract lately noted let to remodel Carroll Mansion, Lombard and Front Sts.

Okla., Kendall, P. O. at Tulsa—Fire Station.—City voted \$15,000 bonds to erect fire station. Address The Mayor. (Lately noted.)

Tex., Dallas.—Fire Station.—City receives bids until Jan. 5 to erect fire station at Davis and Bishop Sts., Oak Cliff; J. O. Gill, Archt., Dallas. (Lately noted.)

Tex., Orange.—Municipal Building.—City plans to erect municipal building. Address The Mayor.

COURTHOUSES

La., Shreveport.—Police Jury is reported to erect courthouse; 1 story; concrete, brick and steel; cost about \$50,000. Address W. T. Crawford, Prest. Police Jury.

La., Monroe.—Ouachita Parish Police Jury is considering bond issue to erect courthouse and jail; Leroy B. Gulotta, Clk.

DWELLINGS

Ala., Troy.—Dowling Ogletree will erect bungalow.

Fla., Jacksonville.—J. C. Pritchard will erect 2-story frame residence; cost \$3000.

Fla., Orlando.—E. O. Willets, Kokomo, Ind., will erect residence.

Fla., St. Petersburg.—Willis T. Pierson will erect residence; 45x50 ft.; frame; asbestos roof; hard pine floors; fireplaces and gas heat; electric lights; cost \$3500.

Fla., St. Petersburg.—C. M. Roser will erect residence on Booker Creek Drive; Swiss chalet style; 3 stories; garage.

Ga., Atlanta.—E. Morris will erect 1-story 7-room brick veneer residence; cost \$3250.

Ga., Atlanta.—Charles C. McGhee will erect residence on Pace's Ferry Rd.; cost \$35,000 to \$40,000.

Ga., Cedartown.—Cedartown Cotton & Export Co. will erect 20 or more cottages.

Md., Baltimore.—Druid Realty Corp., Joseph Berman, Prest., 231 Courtland St., will erect 6 dwellings on Lake Drive.

Md., Baltimore.—Mrs. Julia H. Elcheberger commissioned E. H. Glidden, Garrett Bldg., Baltimore, to prepare plans for developing Hilton estate, near Gwynn's Falls Park; erect bungalows, etc.; 4, red brick with rough stone chimneys; 3, stucco and stone, red tile roofs; 5, brick, stone and stucco; rough stone retaining wall, 20 ft. high, on west side; cost \$500,000; construction in charge of Allen H. Potts, 901 Cold Spring Lane, Baltimore.

Md., Baltimore.—Ernest E. Robinson, 604 N. Carrollton Ave., will erect residence in Ten Hills.

Md., Baltimore.—Wm. T. Childs, 14-16 W. 20th St., has plans by F. E. Beall, 306 St.

BUILDING NEWS

BUILDINGS PROPOSED

APARTMENT-HOUSES

La., New Orleans.—John X. Wegmann and Arthur O. Keefe are promoting company to erect store and apartment building. (See Stores.)

Md., Baltimore.—Parkway Theater Co. will convert residence into store and apartment building. (See Theaters.)

Md., Roland Park.—Morgan & Millard, Baltimore and South Sts., Baltimore, state they have made no definite plans to erect apartment-house as lately reported; considering sale of property.

Mo., Kansas City.—C. J. Black will erect 3 flats at 27th and Harrison Sts.

Mo., Kansas City.—Chas. H. Elliott will erect apartment-house at 10th St. and Lydia Ave.; 5 stories; 45 or 50 suites; cost \$80,000 to \$100,000.

N. C., Sanford.—D. C. Laurence is reported to erect 2 double apartment houses; cost \$4500.

S. C., St. Louis.—John C. Kraus will erect apartment-house.

Tex., Dallas.—E. P. Yates will erect 2-story frame tenement; cost \$3000.

Tex., Dallas.—J. J. Albers will erect apartment-house; brick.

Tex., Dallas.—James Jackson, 216 S. Brighton St., has plans by H. B. Thompson, Southwestern Life Bldg., Dallas, for 2 apartment-houses; 43x54 ft.; brick veneer over hollow tile; pitch and gravel roof; wood floors; gas heat; cost \$10,000 each; construction by owner. (Lately noted.)

Tex., Dallas.—W. H. York, 1007 Sunset Ave., will erect duplex apartment-house on Park Row.

Tex., El Paso.—J. Y. Baskin will erect

apartment-house at California and Campbell Sts.; 110x120 ft.; 3 stories; 27 two, three and four-room suites; each apartment to have sleeping porch, garage, individual telephones, tile baths, built-in furniture; servants' rooms, laundries, etc., in basement; roof garden; ballroom; glass-enclosed conservatory on first floor of patio or court; reinforced concrete; fireproof; terra-cotta finish; plans completed by Jan. 15; construction by June; cost \$60,000.

Tex., El Paso.—M. Aragon will erect apartment-house; 3 stories; foundation for 3 additional stories; stores on first floor; cost \$50,000.

W. Va., Martinsburg.—Dr. H. S. Gardner will erect store and apartment building. (See Stores.)

ASSOCIATION AND FRATERNAL

Mo., Galena.—F. O. E. will erect \$20,000 structure; 3 stories; chapter room on 3d. floor; ballroom on first floor.

Miss., Kilm.—A. F. & A. M. plan to erect lodge hall.

Mo., St. Louis.—Negro Y. M. C. A., 2702 Lawton Ave., acquired site at Pine St. and Ewing Ave. and will erect building; brick; 5 stories; 150 dormitory rooms; assembly hall, gymnasium, swimming pool, etc.

Okla., Bristow.—Creek Lodge No. 226, A. F. & A. M., plans to erect Masonic temple; 3 stories; 75x140 ft.; brick; plans prepared; contract let soon; cost \$20,000.

Tex., Beaumont.—Curley Pine Camp, W. O. W., will erect 2-story brick and concrete business and lodge building; 60x120 ft.; cost \$20,000; lower floor for Coca-Cola Bottling Works; upper floor, lodgerooms; Babin & Beck, Archts., Beaumont. (Lately noted.)

Paul St., Baltimore, for 12 two-story dwellings in University Place; eight 22.8x37 ft. and four 16x51 ft.; cottage type; brick and tile; cost \$40,000; construction by owner. (Lately noted.)

Mo., Towson.—Lida, Florence and Virginia L. Broughton will erect cottage on Joppa road.

Mo., Kansas City.—Wm. W. Barton of Kansas City Tire & Rubber Corp. will erect residence.

Mo., Kansas City.—Glenco Ry. Co. will erect 2-story stucco veneer dwelling; cost \$3000.

N. C., Asheville.—Kenilworth Hotel Co. is reported to erect 50 dwellings in Kenilworth Park; bungalow type; cost \$6000 each. (Lately noted to have let contract to erect Kenilworth Inn.)

N. C., Edgemont.—Golden Belt Manufacturing Co. is reported to erect 50 cottages in mill section.

N. C., Winston-Salem.—John L. Casper is reported to erect number of dwellings.

Okla., Carnegie.—S. L. Vaughan is reported to erect residence.

Okla., Carnegie.—J. R. Littlejohn has plans by L. P. Larsen, Chickasha, Okla., for residence; 2 stories; 9 rooms; frame; 34x39 ft.; brick; oak and yellow pine floors; electric fixtures; hot-air heat.

Okla., Oklahoma City.—Chas. J. Ehret will erect residence; 2 stories; frame; cost \$4000.

S. C., Columbia.—W. T. C. Bates, St. Matthews, S. C., will erect residence in Wales Garden.

S. C., Columbia.—W. B. Guimarin will erect residence in Wales Garden.

Tex., Dallas.—J. B. Cranfill will erect 8-room, 2-story frame residence; cost \$3000.

Tex., Dallas.—A. J. Smith will erect residence; electric fixtures; garage.

Tex., Dallas.—Henry E. Elrod has plans by Orlopp & Orlopp, 623 Busch Bldg., Dallas, for 2-story, 11-room residence; hardwood floors; metal tile roof; electric fixtures; hot-air heat; 3 baths; cost \$10,000; contract let in about 30 days.

Tex., Dallas.—R. E. L. Sherrard has plans by H. A. Overbeck, 502 Juanita Bldg., Dallas, for \$3000 residence; 2 stories; 8 rooms; frame. (Lately noted.)

Tex., Dallas.—W. R. Lynch, 814 Southwestern Life Bldg., will erect residence at 311 W. Jefferson St.; 8 rooms; frame; cost \$3000.

Tex., Dallas.—William Thompson, of Thompson, Knight, Baker & Harris, will erect residence.

Tex., Dallas.—H. A. Pain will erect residence and business building; frame.

Tex., El Paso.—Macon Realty Co. will erect 8 bungalows in Government Hill Addition; cost \$30,000.

Tex., El Paso.—A. A. Lawler will erect \$3000 bungalow.

Tex., El Paso.—Geo. W. Sharp will erect \$3000 bungalow.

Tex., Houston.—R. S. Sterling will erect 4 dwellings; cost \$14,000.

Tex., Lampasas.—C. D. Stokes will erect brick building.

Tex., Lampasas.—M. Y. Stokes will erect 2-story interlocking tile residence; plans in progress.

Tex., Lampasas.—Field Senterfitt is having plans prepared for 2-story brick residence.

Tex., Paris.—Mrs. Percy Fairfax will erect 2-story frame residence; cost \$3600.

Tex., Paris.—R. I. Scales will erect residence; 2 stories; frame; cost \$3700.

Tex., Wichita Falls.—H. C. Weeks is having plans prepared by Field & Clarkson, Wichita Falls, for residence; cost about \$7000.

Va., Graham.—C. W. Pierce, Mgr., Keys Plating Mill Co., will erect residence; 42 to 15 rooms; frame.

Va., Richmond.—Charles Milhiser will erect three 2-story brick residences; cost \$17,000.

Va., Richmond.—Davis Bros. will erect 2-story brick dwelling, 3305-07 Monument Ave.; cost \$12,000.

GOVERNMENT AND STATE

Ga., Barnesville.—Postoffice.—Treasury Dept., Jas. A. Wetmore, Act. Supervising Archt., Washington, D. C., opens bids Feb. 19, to erect postoffice; drawings and specifications at office of Mr. Wetmore and from custodian of site, Barnesville.

Ga., Moultrie.—Postoffice.—Treasury Dept., Jas. A. Wetmore, Act. Supervising Archt., Washington, D. C., opens bid Feb. 12 to erect postoffice; drawings and specifications

at office Mr. Wetmore and from custodian at site, Moultrie.

Miss., McComb.—Postoffice.—Treasury Dept., Jas. A. Wetmore, Act. Supervising Archt., Washington, D. C., opens bids Feb. 16 to erect postoffice; plans and specifications at office Mr. Wetmore as above and from custodian at site, McComb.

Mo., Bonne Terre.—Postoffice.—Treasury Dept., Jas. A. Wetmore, Act. Supervising Archt., Washington, D. C., opened bids to erect postoffice; Charles Weitz Sons, Des Moines, Iowa, low bid for limestone at \$33.544; R. S. Moore, Lafayette, Ind., for sandstone at \$36.200. (Lately noted.)

Okla., Oklahoma City.—Postoffice.—Treasury Dept., Jas. A. Wetmore, Act. Supervising Archt., Washington, D. C., opened bids for remodeling, extension, etc., of postoffice and courthouse; Algernon Blair, Montgomery, Ala., low bid at \$219,400. (Lately noted.)

Tex., Nacogdoches.—Postoffice.—Treasury Dept., Jas. A. Wetmore, Act. Supervising Archt., Washington, D. C., opened bids to construct postoffice; Graeme-McDonald Co., San Francisco, Cal., low bid at \$46,600. (Lately noted.)

HOSPITALS, SANITARiums, ETC.

Miss., Laurel.—South Mississippi State Charity Hospital will let contract about Feb. 15 to erect hospital; cost about \$75,000; Xavier A. Kramer, Archt., Magnolia, Miss. (Previously noted.)

Okla., Tulsa.—Ross Grosshart, 202 Unity Bldg., will erect hospital building; 3 stories; 48x120 ft.; brick, stone and reinforced concrete; cost about \$70,000; D. Eichenfeld, Archt., 420 First National Bank Bldg.

Tex., Ennis.—Ennis Sanitarium Co. rejected all bids to erect sanitarium and will call new bids in several months; 40x75 ft.; cost \$17,000. (Lately noted.)

Va., Richmond.—City rejected all bids to erect addition to Virginia Hospital for baby ward; Carneal & Johnston, Archts., Richmond, Ind. E. Butler, Building Inspector. (Contract lately noted let.)

Va., Suffolk.—Virginia Hospital, Dr. W. C. Gibson, Prest.; Dr. R. H. Pretlow, V.-P.; D. F. J. Morrison, Secy.; Dr. L. W. White, Treas.; acquired former St. Andrew's Hospital; will remodel and equip for general hospital. (Lately noted.)

HOTELS

Ark., Russellville.—M. R. Craig will erect hotel on site of present hotel.

Ga., Macon.—N. M. Block is reported to expend \$75,000 for improvements to Hotel Dempsey; after plans by Alfred Feldheimer, 5 E. 42d St., New York.

La., Shreveport.—A. J. Armstrong is preparing plans for hotel for owner whose name is withheld; 6 stories and basement; 40x150 ft.; brick; stone and terra-cotta trim; reinforced concrete; sanitary and wood floors; steam heat; electric and gas lights; electric elevators; cost about \$100,000; bids opened about April 1.

Miss., Meridian.—L. H. Arky estate will repair Great Southern Hotel noted damaged by fire at loss \$10,000 to \$30,000.

Mo., Excelsior Springs.—J. H. White and I. J. Ringolsky will soon let contract to erect 2 additional stories to Elms Hotel; cost \$125,000 to \$150,000; leased by John Emmke and Dr. J. M. Bogart.

Mo., Joplin.—W. O. Miles of Webb City, Mo., will erect 2-story hotel on Clarendon hotel site; cost \$12,000.

Okla., Drumright.—W. Kahn, Tulsa, Okla., plans to erect hotel building.

Tex., Beaumont.—W. G. Hegele has plans by Mauer, Knoblock & Simank, Beaumont, for business and hotel building; 2 stories; 50x140 ft.; cost \$17,000.

Tex., El Paso.—J. S. Curtis will erect store and hotel building. (See Stores.)

MISCELLANEOUS

Ark., Little Rock.—Home.—Florence Crittenton Home Trustees are having plans prepared by Geo. W. Donaghey, Little Rock, for building to replace burned structure. (Previously noted.)

Ga., Hawkinsville.—Cafe.—Nick Cabero will erect cafe building. (See Stores.)

Ga., Hawkinsville.—Market.—C. E. Thompson will erect market building.

N. C., Salisbury.—Farm.—Wm. F. and J. L. Fleming acquired property near Salisbury and will develop for stock farm, erect buildings, etc.

Tex., Oak Cliff (Sta. A, Dallas)—Pavillon. Kidd Springs Boating and Fishing Club will rebuild and enlarge pavilion, widen swimming pool, etc.; completion about May 15.

W. Va., Deegans.—New Pocahontas Coal Co. will rebuild clubhouse noted damaged by fire at loss \$3500.

RAILWAY STATIONS, SHEDS, ETC.

Md., Baltimore.—Pennsylvania R. R., Geo. R. Sinnickson, Gen. Agent, Union Station, Baltimore, has plans by A. C. Shand, Ch. Engr., Philadelphia, for freight warehouse on Thames St.; 2 stories and shed; steel frame; asbestos protected sides; slag roof; concrete floors; steam heat; electric lights; bids opened Jan. 6; following contractors estimating: B. F. Bennett Building Co., 123 S. Howard St.; M. C. Davis, 15 E. Fayette St.; Cowan Building Co., 106 W. Madison St.; John Waters Building Co., 23 E. Center St.; R. B. Mason, 305 W. Madison St. and Consolidated Engineering Co., 243-255 Calvert Bldg., all of Baltimore.

N. C., Cherryville.—Seaboard Air Line Ry. W. D. Faucette, Ch. Engr., Norfolk, Va., will erect depot.

N. C., Winston-Salem.—Winston-Salem Union Station Co. will soon begin to erect union station; 110x102 ft.; 3 stories and full basement; concrete foundation; concrete basement; face brick above ground; steel reinforcement; stone trimmings; shingle tile roof; terra-cotta balusters; copper dome; coal vault in basement 34x27 ft.; open course 102x40 ft. formed by massive columns and arches, under main roof cover 17 ft wide; main waiting room 40x63 ft. with terrazzo floor, marble border and wainscoting; 2 sanitary drinking fountains; passenger elevators; steel viaduct on concrete pillars, carrying crosstied wood block pavement; iron stairways; covered passageways, etc.; cost several thousand dollars; J. E. Crawford, Ch. Engr., Norfolk & Western Ry., Roanoke, Va., in charge of construction. (Previously noted.)

Tex., Dallas.—Texas & Pacific Ry., C. H. Chamberlin, Ch. Engr., Dallas, Tex., will erect 1-story freight shed; cost \$7000.

SCHOOLS

Ala., Birmingham.—City will erect high school; bids opened; Julian Kendrick, City Engr.

Ark., Shiloh.—Shiloh School Dist. will erect school building. Address Dist. School Trustees.

Fla., Holly Hill.—Holly Hill School Dist. No. 23 voted \$8000 school bonds; C. R. M. Sheppard, Secy. Board of Public Instruction, De Land, Fla.

Fla., Jacksonville.—Board of Public Instruction of Duval County opens bids Jan. 13 to erect 16 or 18-room brick school exclusive of plumbing and heating; F. A. Hathaway, Supt. of Board; plans and specifications at office Rutledge Holmes, Archt., and Mr. Hathaway, both of Jacksonville.

Fla., Jacksonville.—Duval County Board of Public Instruction, F. A. Hathaway, County Supt., rejected all bids to erect Stanton School and will probably receive new bids on or about Jan. 27; plans by Mellen C. Greeley, Jacksonville, call for structure 240x60 ft. with auditorium wing, 50x55 ft.; brick bearing walls; 5-ply built up roof; metal (or terra-cotta), tile and concrete floors; steam heat; city lighting; cost \$85,000. (Lately noted.)

Fla., Lake Helen.—Volusia County Board of Public Instruction, C. R. M. Sheppard, Supt., De Land, Fla., receives bids until Jan. 8 to erect negro school; 45x75 ft.; 1-story; frame; asbestos roof; wood floors; stores; electric lights; cost \$3000; drawing and specifications at office J. T. Cairns, Archt., De Land, Fla. (Lately noted.)

Fla., St. Petersburg.—Board of Education ordered vote Jan. 29 on \$175,000 bonds to erect school. (Lately noted.)

Ga., Athens.—Board of Trustees, State Normal School receives bids until Feb. 6 to erect dormitory and academic building; plans and specifications from Jere M. Pound, Prest.

Ga., Fitzgerald.—City votes Jan. 15 on \$23,000 bonds to erect and equip 2 schools; Drew W. Paulk, Mayor.

Ga., Griffin.—Board of Education, W. E. H. Scarey, Jr., Prest., opens bids Jan. 12 to erect high school, North Side graded school and addition to Sam Bailey school according to plans by J. F. Leitner, Wilmington, N. C.; 2 stories and basement; 10 classrooms, auditorium, 2 gymnasiums, domestic science and manual training rooms and study hall; brick; terra cotta trimmings; Barrett speci-

fication and tin roof; rift pine floors; fan blast warm-air heating system; North Side graded school, 6 classrooms; steam heat; brick; 1 story and basement; addition to Sam Bailey school, 2 stories and basement; fan blast heating system in old and new parts; brick construction; plumbing, heating and ventilating to be let separate from general contract. (Previously noted.)

La., Winnfield.—Winn Parish School Board will issue \$35,000 bonds to erect and equip school; J. J. Mixon, Supt.

Md., Baltimore.—Board of Awards rescinded contract lately noted let to remodel Carroll Mansion for school.

Md., Takoma Park, P. O. Washington, D. C.—Bliss Electrical School is having plans prepared by Frank H. Jackson, Aspin, Md., for dormitory; 4 stories; brick; slag and slate roof; iron finish; electric lights; fire and damp proof.

N. C., Fuquay Springs.—Fuquay Springs and Cardenas Consolidated School Dist. plans election on \$15,000 bonds to be supplemented by \$5000 by Wake County Board of Education, Raleigh, N. C.

Tex., Beaumont.—City, J. G. Sutton, Secy., receives bids until Jan. 16 for general construction, heating, plumbing and wiring for school in refinery district; cost \$20,000; plans and specifications at office Mr. Sutton and Sanguinet, Staats & Gottlieb, Archts., Houston and Fort Worth. (Previously noted.)

Tex., Caddo.—School trustees plan to erect high school.

Tex., Vernon.—School Board authorized T. J. Galbraith, 718 Slaughter Bldg., Dallas, to prepare plans for school; 2 stories; brick and tile; gravel roof; steam heat; electric fixtures; cost \$16,000.

Va., Newport News.—Special Building Com., E. I. Cornbrooks, Chmn., receives bids until Jan. 15 to erect Central Grammar School; 80x196 ft.; brick and reinforced concrete; gravel roof; wood floors; furnaces; cost \$80,000; cement sidewalks, \$1800; plans and specifications at office Ferguson, Calrow & Wrenn, Archts., Norfolk, Va., and office W. L. Tabb, Clerk School Board, Newport News. (Previously noted.)

Va., Norfolk.—School Board, Richard A. Doble, Division Supt., Paul-Gale-Greenwood Bldg., receives bids until Jan. 8 for annex to John Marshall school and other alterations; brick and ordinary construction; slate roof; steam heat; 10 rooms; cost \$30,000; plans and specifications at office Herbert W. Simpson, Archt., 601 Board of Trade Bldg., Norfolk. (Lately noted.)

W. Va., Charleston.—Board of Education, W. O. Daum, Secy., receives bids until Jan. 23 to erect Junior High School; revised plans and specifications at office Frank L. Packard, Archt., Columbus, Ohio, and at high school building; also receives separate bids for plumbing and electrical work. (Lately noted.)

W. Va., Charleston.—Board of Education, Charleston Ind. School Dist., has plans by Jas. L. Montgomery, Charleston, for 6-room-and-auditorium Fernbank School; 2 stories; brick; tar and gravel roof; wood floors; mechanical heating and ventilating system; bids opened Jan. 23; plans and specifications at office of Board and Mr. Montgomery, as above. (Lately noted.)

W. Va., Morgantown.—State Board of Control, Charleston, W. Va., receives bids until Feb. 14 for material and erection of following buildings, according to plans by Paul A. Davis, 34, 1713 Sansom St., Philadelphia, Pa.; agricultural building, 85 ft. 9 in. by 185 ft.; 3 stories and basement; slate roof, including heating, plumbing and electrical work; ground floor, cement; first floor, reinforced concrete; second and third floors, wood joist construction; brick walls; terra cotta and limestone trimmings; girls' dormitory 42 ft. 9 in. by 220 ft. 4 in.; porch 12 ft. 11 in. by 66 ft. 1/2 in.; 3 stories and basement; slate and composition roof; including heating, plumbing and sewerage and electrical work; ground floor, cement; first, second and third floors, reinforced concrete construction; brick walls; terra cotta and limestone trimmings; completion of both buildings by July 1; plans and specifications at office of Board at Charleston. (Previously noted.)

STORES

Fla., Safety Harbor.—D. M. Pipkin, Sr., will erect store building; 1 story; 36x40 ft.; metal ceiling; corrugated-iron siding.

Ga., Atlanta.—McWhorter Milner will erect 2-story store building; is receiving bids; John C. Battle, Archt., Grant Bldg., Atlanta.

Ga., Hawkinsville.—Planters Bank is reported to erect store and office building. (See Bank and Office.)

Ga., Hawkinsville.—Nick Cabero will erect store building; also cafe building.

Ga., Hawkinsville.—Eli W. Goode will erect store.

Ga., Macon.—Lamar-Taylor-Riley Co. will erect building on Broadway; 60x210 ft.; 4 stories and basement; P. E. Dennis, Archt., Macon; also remodel present structure on Cherry St.

Ky., Louisville.—New York capitalists purchased property at 5th and Jefferson Sts. through Mueller & Martin, Louisville; site 65x210 ft.; reported to erect building.

La., New Orleans.—John X. Wegmann and Arthur O. Keefe are promoting company to erect store and apartment building; capital stock \$200,000.

La., New Orleans.—Julius Koch will erect 5-story business and office building; silica brick.

La., Shreveport.—J. Dambly is reported having plans prepared for 3 or 4-story store and office building to replace burned structure.

Md., Baltimore.—Parkway Theater Co. will convert residence into store and apartment building. (See Theaters.)

Md., Baltimore.—Solomon Rosenbloom has plans by Walter M. Gleske, 65 Gunther Bldg., Baltimore, for 6-story concrete business building at 12-14 N. Paca St.; following contractors are estimating: Milton C. Davis, 15 E. Fayette St.; Consolidated Engineering Co., 243-255 Calvert Bldg.; Fred Decker & Sons, 1213 E. Biddle St.; Cogswell-Koether Co., 406 Park Ave.; David M. Andrew & Co., Mt. Vernon Ave. and 26th St.; Richard H. Frazier & Sons, 224 W. Mulberry St.; B. F. Bennett Building Co., 123 S. Howard St.; Willard E. Harn Co., 213 N. Calvert St.; J. Henry Miller, Inc., Eutaw and Franklin Sts.; R. B. Mason, 308 W. Madison St.; Price Concrete Construction Co., 210 Maryland Trust Bldg.; J. L. Robinson Construction Co., 63 Knickerbocker Bldg.; C. E. Stubbs, 548 Equitable Bldg.; Singer-Pentz Co., 600 Equitable Bldg.; West Construction Co., Knickerbocker Bldg.; John Waters Building Co., 23 E. Center St.; Arthur F. West, 306 Builders' Exchange Bldg.; Henry Smith & Sons, 7 E. German St.; and Morrow Bros., Fidelity Bldg.; all of Baltimore.

Md., Salisbury.—E. C. Brewington, 2332 Eutaw Place, Baltimore, will erect store building to replace structure noted damaged by fire; 28½x85 ft.; 3 stories; brick; white marble trimmings; tin roof; wood floors; cement on concrete sidewalks; cost \$15,000; construction begins in 10 days.

Mo., Armstrong.—W. H. Yancey and L. J. Harvey will erect store buildings to replace structures lately noted damaged by fire; 2 structures, 25x100 ft. each, and one 25x60 ft.; brick; stoves; electric lights; other details not determined. Address Mr. Yancey.

Mo., St. Joseph.—Richardson Dry Goods Co. is reported to erect addition to wholesale house; 100x140 ft.; 7 stories and basement; cost \$125,000.

Okla., Carnegie.—Dan W. Perry will erect 2-story brick business building.

Okla., Cheyenne.—Randell Mercantile Co. will erect brick business building.

Okla., Eufaula.—W. L. Belt Trading Co. will erect brick business building.

Okla., Waurika.—O. E. Heacock and Jesse J. Hunter are having plans prepared for brick business building.

S. C., Spartanburg.—Isaac Andrews will erect building for showroom.

Tenn., Dayton.—Dickey Bros. will erect brick store building to be occupied by Jake Benkovitz; completion about March 15.

Tenn., Nashville.—Vaulx estate and W. S. Bransford will erect 2 buildings; 2 stories; former to contain 2 stores, latter store on lower floor; offices above; mat brick with terra-cotta front; cost \$30,000; plans by and construction in charge of Ausmus & Norton, Stahlman Bldg., Nashville.

Tex., Beaumont.—W. G. Hegale will erect business and hotel building. (See Hotels.)

Tex., Beaumont.—W. O. W. will erect business and lodge building. (See Association and Fraternal.)

Tex., Brady.—W. H. Gibbons will erect three 2-story brick buildings.

Tex., Dallas.—Fakes Furniture & Carpet Co., 1609-11 Elm St., will erect addition to building.

Tex., Dallas.—H. A. Pain will erect residence and business building. (See Dwell.)

Tex., El Paso.—J. S. Curtis will erect 4-story building; lower floor, stores; upper floors, hotel rooms each equipped with private bath.

Tex., El Paso.—M. Aragon will erect store

and apartment building. (See Apartment-houses.)

Va., Portsmouth.—Harry L. Alexander will erect 1-story brick store building.

W. Va., Martinsburg.—Dr. H. S. Gardner will erect 3-story store and apartment-house; 55x200 ft.; cost \$40,000.

THEATERS

Md., Baltimore.—Parkway Theater Co. commissioned Oliver B. Wight, 1122 Munsey Bldg., Baltimore, convert residence at 1820 N. Charles St. into store and apartment building; erect addition to Parkway in rear of lot, providing 250 additional seats; C. C. Watts, 407 E. 25th St., and Richard H. Frazier & Son, 224 W. Mulberry St., both of Baltimore, are estimating.

BUILDING CONTRACTS AWARDED

APARTMENT-HOUSES

Tex., Marshall.—Kent D. Allen let contract to S. R. Burnett Lumber Co., Marshall, to erect apartment-house; 22x57 ft.; 2 stories; 12 rooms; brick; mill construction; composition roof; pine floors; cost \$5300; John Carpenter, Archt., Marshall.

BANK AND OFFICE

Fla., Jacksonville.—O. P. Woodcock has contract to erect office and store building at Jefferson and Adams Sts.

Fla., Tarpon Springs.—A. Leouis let contract to erect store, office and hall building. (See Stores.)

Ga., Atlanta.—Trust Company of Georgia let contract to Gude & Co., Atlanta, to remodel and extend building; Georgia marble, bronze and oak woodwork; Georgia marble and cork tile floors; cost \$17,000; construction begins Jan. 20. Address contractors. Morgan & Dillon, Archts., Atlanta. (Lately noted.)

Ga., Atlanta.—Grant Construction Co. let contract to alter offices for Seaboard Air Line Ry. (See Railway Stations, Sheds, etc.)

La., Bogalusa.—E. R. Cassidy let contract to erect store and office building. (See Stores.)

Md., Highlandtown.—Savarese Macaroni Co., Baltimore and 9th Sts., let contract to E. Eyring & Sons, 800 S. 3d St., Baltimore, to erect office building and shipping department; 2 stories; brick; 50x100 ft.; George R. Callis, Jr., Archt., 55 Knickerbocker Bldg., Baltimore.

Tenn., Memphis.—Union & Planters' Bank & Trust Co. let contract to James Alexander Construction Co., Memphis, to alter 15-story bank and office building; composition roof; tile arch floor construction; 4 high speed Otis elevators; reported cost \$125,000; G. M. Shaw & Co., Archts., Memphis. (Lately noted.)

Tex., Marlin.—Spivey, Carter & Bartlett let contract to J. A. Phipps, Marlin, to erect office building; 1 story; cost \$3000.

W. Va., Macdonald.—New River Co. let contract to D. J. Phipps, Roanoke, Va., to erect general office building lately noted; 2 stories; brick; 80x100 ft.; composition roof; oak floors; electric lights; steel vault lights; cost \$25,000; steam heat \$5000; W. B. Smith, Archt., Huntington, W. Va. Address M. C. Moore, Pur. Agt., Macdonald. (See Machinery Wanted—Vault Doors; Lighting Fixtures; Telephone Outfit.)

CHURCHES

Ark., McGehee.—Baptist Church, Rev. A. N. Stanfield, Pastor, let contract to erect 2-story frame parsonage.

Md., Baltimore.—St. Mary Star of the Sea Church, Riverside Ave. and Clement St., Rev. J. T. Whelan, Pastor, let contract to Chas. J. Cassidy Co., 715-16 Southern Bldg., Washington, D. C., to erect convent; 4 stories; terra cotta, brick and stone; cost \$20,000; Murry & Olmstead, Archts., 1413 H St. N. W., Washington. (Noted in April.)

S. C., Brunson.—Baptist Church let contract to B. E. and L. H. Grandy, Bamberg, S. C., to erect building; metal ceiling and shingles; cost \$5000. (See Machinery Wanted Metal Ceilings.)

Tex., Brady.—Methodist Church let contract to erect \$20,000 building. Address The Pastor.

Tex., Paris.—First Christian Church let contract to Foster & Varner, Paris, to erect \$40,000 building; 2 stories and basement; brick; electric fixtures; Woodruff & Van Slyke, Archts., Fort Worth. (Lately noted.)

Va., Hampton.—W. W. Scott will erect theater on East Queen St.; site 40x225 ft.

WAREHOUSES

Tex., El Paso.—E. C. Bray and T. S. Reed will erect warehouse.

Tex., Houston.—Moncrief-Lenoir Manufacturing Co. will erect brick warehouse; cost \$10,000.

Tex., Lampasas.—Stokes Bros. will erect warehouse.

W. Va., Huntington.—Foster-Thornburg Hardware Co. will erect addition to warehouse; 50x210 ft.; 4 stores; brick; built-up roof; wood floors; electric lights and elevators; cost \$35,000.

Tex., Haskell.—Baptist Church let contract to erect brick building. Address The Pastor.

Va., Norfolk.—Church of the Good Shepherd let contract to Nichols & Lindemann to erect combination chapel and Sunday-school room; tapestry brick and white stucco; slate roof; brick floors; inside walls and partitions brick stucco; 36x70 ft.; Neff & Thompson, Archts., Norfolk. (Noted in Aug.)

CITY AND COUNTY

Okla., Sapulpa.—Library.—City Library Directors let contract at \$22,360 to George E. Kadane, Sapulpa, to erect Carnegie library; about 75x70 ft.; brick and Bedford limestone; flat composition roof; first floor, cement covered with cork; maple basement floor; composition within 8 months. (Lately noted.)

Tex., Alice.—Jail.—Jim Wells County let contract to Southern Structural Steel Co., San Antonio, to erect additional cells in jail. (Lately noted.)

DWELLINGS

Ark., Little Rock.—Ed Cornish, 1121 Schiller Ave., let contract to J. R. Casey, Little Rock, to erect residence; 40x62 ft., exclusive of porches; brick and stone veneer; tile roof; hardwood floors; cost \$25,000; heating, \$1500; Theo. M. Sanders, Archt., Little Rock; all sub-contracts let; construction begun. (Lately noted.)

Fla., Orlando.—Mr. Glenn, Editor of Orlando Sentinel, let contract to Walter E. Brown, 208 E. Livingston Ave., Orlando, to erect residence; 14 rooms; 2½ stories; Murry S. King, Archt., Orlando.

Fla., Leesburg.—W. R. Vansant let contract to T. J. Daniel, Leesburg, to erect residence; brick; tile roof; cost \$12,000.

Fla., St. Petersburg.—Martin DeTamble, Chicago, let contract to Gerald Stillson to erect \$3500 residence in Roser Park.

Ga., Atlanta.—J. F. Settles will erect 1-story brick dwelling; cost \$5000; M. G. Norris, Contr., Atlanta.

Ga., Savannah.—E. M. Nichols will erect 2-story frame residence; tin roof; hardwood floors; cost \$4500; Stillwell-Wyly Corporation, Contr., Savannah.

La., New Orleans.—Andrew Demorelle let contract to Martin G. Gund, New Orleans, to erect frame residence; cost \$3000.

La., New Orleans.—Rudolph F. Becker let contract to J. S. Garcia, New Orleans, to erect residence; 2 stories; stucco; cost \$4423.

La., New Orleans.—Industrial Homestead Assn. let contract to G. E. & E. E. Reimann Co., New Orleans, to erect residence; cost \$7440.

N. C., Charlotte.—Elizabeth Mill Co. let contract to Stroupe Contracting Co., Charlotte, to erect number of dwellings.

S. C., Anderson.—Equinox Mills let contract to Builders' Lumber & Supply Co., Anderson, to erect ten 4-room and five 2-room cottages for operatives; frame; wood shingle roof; cost \$11,000. Address contractor. (Lately noted.)

S. C., Laurens.—Watts Mills let contract to Fiske-Carter Construction Co., Greenville, S. C., to erect 25 cottages; 3 rooms each; frame; wood shingle roofs; wood floors; J. E. Sirrine, Archt., Greenville. (Lately noted.)

Tex., Brady.—G. R. White let contract to erect 8 residences on ranch near Whiteland.

Tex., Dallas.—Mrs. Jules Schneider let contract to H. Kramer, 210 Southwestern Life Bldg., Dallas, to erect residence at Lake Side Drive and Euclid Ave.

Tex., Dallas.—T. F. Mooney, 834 Woodlawn Ave., let contract to A. A. Weldon, to erect

8-room brick cottage; cost \$4250. (Lately noted.)

Tex., Houston.—J. E. Wright let contract to A. C. Bell to erect 11 dwellings; bungalow type; stucco; cost \$17,050.

Tex., Waco.—Dr. M. W. Colgin let contract to Cammack & Crawford, Waco, to erect \$10,000 residence; Ross & Son, Archts., Bankers' Trust Bldg., Waco.

Tex., Wichita Falls.—Sith Langford let contract to Taylor Bros., Wichita Falls, to erect 2-story residence; cost \$8000.

Tex., Wichita Falls.—Lester Burns let contract to B. S. Smith & Co., Wichita Falls, to erect 1-story bungalow; cost \$4500.

GOVERNMENT AND STATE

Ark., Eureka Springs.—Postoffice.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., let contract at \$37,900 to R. S. Moore, Lafayette, Ind., to erect postoffice; 42x55 ft.; brick; stone trim; block tin roof; reinforced concrete and terrazzo floors; hot-water heat; electric lights; completion in 14 months. (Lately noted.)

Md., Frederick.—Postoffice.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., let contract at \$76,000 to D. M. Andrew Co., Mt. Vernon Ave. and 26th St., Baltimore, to erect postoffice. (Lately noted.)

Tex., San Antonio.—Storehouse.—Treas. Dept., Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., let contract to P. M. Gordon Co., to erect storehouse at United States Arsenal; 400x43 ft.; reinforced concrete, steel sashes and heavy cast stone; 1-story and basement; constructed to permit 3 additional stories later; overhead track carriers and cranes; sprinkle system; cost \$60,000; Henry T. Phelps, Archt., Gunther Bldg., San Antonio.

HOSPITALS, SANITARIUMS, ETC.

Mo., Kansas City.—Jas. E. Taylor, 711-12 Ridge Arcade, Kansas City, general contractor, to erect addition to city hospital, let following sub-contracts: Reinforcing bars, Laclede Steel Co.; face brick, Hydraulic Press Brick Co.; terra-cotta, St. Louis Terra-Cotta Co.; metal lath, Berger Mfg. Co., all of St. Louis; cut stone, Bremer Cut Stone Co.; structural iron and steel, J. Goldberg & Son; miscellaneous and ornamental iron work, L. F. Kleeman Mfg. Co.; sheet metal, Kroubrot Kornice Company; roofing, Standard Roofing and Material Co.; tile, Interior Marble & Tile Co.; terrazzo, Builders Material Supply Co.; millwork, Huttig Mill Works Co.; trim hardware, Richards & Conover Hardware Co.; painting, T. J. Johnson Painting Co.; glazing, Campbell Glass & Paint Co.; galvanized sanitary trim, Zahner Mfg. Co., all of Kansas City; marble, Lantz, McNeerney Marble Co.; plastering, W. R. Jewell; weatherstrips, Higgins Weatherstrip Co.; plans by Frederick C. Gunn, 1106 Republic Bldg., Kansas City, call for building about 79x36, 60x56 and 18x30 ft.; brick and concrete; tar and gravel roof; concrete floors; heating and lighting from main plant; cost \$90,000. (Lately noted.)

W. Va., Fairmont.—Cook Hospital Co., M. R. Frantz, Supt., will rebuild burned hospital; tin roof; wood and tile floors; hot-water heat; will probably let contract to local company.

HOTELS

Fla., Jacksonville.—Salvation Army let contract to erect building to contain hotel, etc. (See Miscellaneous Structures.)

Fla., Vero.—Hoosier Realty Co., Terra Haute, Ind., let contract to J. H. Baker, Vero, to erect hotel; 48x69 ft.; frame; felt roof with crushed slate surface; yellow pine floors; electric lights; cost \$3500; only one wing to be erected at present; 15 rooms, dining-room, kitchen, parlors, etc.; Rodney W. Leonard, Archt., Terra Haute, Ind.

Md., Baltimore.—Chateau Hotel & Restaurant Co. let contract to erect hotel and restaurant at Charles St. and North Ave.; about 60x90 ft.; ordinary construction; Smith & May, Archts., Calvert Bldg., Baltimore; contractor's name withheld. (Previously noted.)

MISCELLANEOUS

Fla., Jacksonville.—Home, etc.—Salvation Army let contract to O. P. Woodcock, 408 Main St., Jacksonville, to erect 5-story building for storeroom, 80-room hotel, garage, etc.; brick; cost \$32,000. (Lately noted.)

Fla., Tarpon Springs.—Hall.—A. Leouis let contract to erect building for hall, etc. (See Stores.)

RAILWAY STATIONS, SHEDS, ETC.

Ga., Atlanta.—Grant Construction Co. let contract to Flagler Co., Atlanta, to remodel offices for Seaboard Air Line Ry. at Marietta and Broad Sts.; interior walls terra cotta and panel; hardwood floors; steam heat connected with city mains; city electric lights; cost \$3000 to \$4000; construction begun. (Lately noted.)

W. Va., Sophia.—Virginia Ry. Co., H. Fernstrom, Chief Engr., Norfolk, let contract to English Sash & Lumber Co. to erect combination stations at Sophia and Stonecoal to contain 2 waiting-rooms and freight shed; cost about \$3000.

W. Va., Stonecoal.—See W. Va., Sophia.

SCHOOLS

Ala., Capitol Heights P. O. Montgomery.—Town let contract to M. G. Parrish, Capitol Heights, to erect school; 1-story; brick; stone columns; arcade front; court in center; 6 classrooms; 101x106 ft.; metal roof; wood floors; steam heat; electric lights; Smith & Carter, Architects, 21½ Dexter Ave., Montgomery. (Lately noted.)

Mo., Kansas City.—Geo. M. Bliss, Kansas City, general contractor to erect automobile school for E. J. Sweeney, 712 E. 15th St., let following subcontracts: Malu excavation, Norton Bros.; reinforcing for footings, Arkansas Bridge Co.; form lumber, Badger Lumber Co.; terra-cotta, Western Terra Cotta Co.; ornamental iron, Southwest Wire & Iron Co.; millwork, American Sash & Door Co.; plumbing and heating, Arthur McKinley Plumbing & Heating Co.; electric wiring, R. C. Barnett; roofing, A. J. Shirk Roofing Co.; cement testing, Kansas City Testing Laboratory; metal doors, Johnson Mfg. Co.; sheet metal and tile roofing, Kansas City Sheet Metal & Tile Co.; metal windows, Hy. Wels Mfg. Co.; all of Kansas City; reinforcing, waterproofing hy-rib and channels, Trussed Concrete Steel Co., Youngstown, O.; sidewalk lights, American Luxfer Prism Co.; pyro bar roof tile, U. S. Gypsum Co.; both of Chicago; settling reinforcing steel, Steel Form Construction Co.; elevators, Warner Elevator Mfg. Co., Cincinnati; glass and glazing, Pittsburgh (Pa.) Plate Glass Co.; cut stone, Phoenix Cut Stone Co.; plans by Keene & Simpson, Kansas City, call for 10-story structure; 55x116 ft.; reinforced concrete; Barrett specification roof; concrete floors; low-pressure vacuum heat; gas or oil engine for lighting plant; freight and passenger elevators; cost \$300,000. (Previously noted.)

N. C., Hickory.—City let contract to C. A. Kline, Carthage, N. C., to erect graded school; 60x120 ft.; brick; Barrett specification roof; wood floors; electric wiring; cost \$19,000; steam heat, \$2000; J. J. Baldwin, Archt., Anderson, S. C.; construction begun. (Previously noted.)

Okla., Collinsville.—Trustees let contract to erect 1-room temporary building as annex to General High School. Address Dist. School Trustees.

Tex., Austin.—University of Texas let contract at \$8000 to A. W. Jones, Austin, to erect temporary gymnasium; wood.

Tex., Beaumont.—School Board let contract to McBride & Law, Beaumont, to erect 6-room addition to Junker School; semi-fireproof; slate roof; wood floors; cost \$14,000; gravity steam heat, \$3000; Sanguinet, Staats & Gottlieb, Architects, Houston; construction to begin immediately. Address contractors. (Lately noted.)

Va., Portsmouth.—School Board, John F. Wilson, Clerk, let contract to erect high school at High St. and 4th Ave., and colored school to E. C. Ford, Norfolk, at \$111,682 and \$47,271, respectively; other low bids as follows: American Heating & Ventilating Co., Richmond, Va., at \$9990 for warm-air heat and \$13,326 for steam heat for high school, \$7178 for warm-air heat and \$9686 for steam heat for colored school; Oscie Dashiell, Portsmouth, at \$462 for toilet equipments in school at Glasgow St. and \$748 at Elm Ave school; Seay Bros., Norfolk, at \$1350 and \$1082 for toilet houses at Elm Ave. and Glasgow St. schools, respectively; Charles M. Robinson, Inc., Archt., Times-Dispatch Bldg., Richmond. (Lately noted.)

STORES

Ala., Birmingham.—Oster Bros. Furniture Co. has plans by Wm. Leslie Welton, American Trust & Savings Bank Bldg., and let contract to Smallman & Brice Co., both of Birmingham, for improvements to store, to include new elevator and lighting systems,

show windows, office space, etc., remodeled; cost \$5000.

Ark., Little Rock.—Central Supply Co. let contract to Stewart-McGhee Construction Co., Little Rock, to erect building; 35x140 ft.; 5 stories and basement; reinforced concrete; fronts faced with brick and stone; built-up 5-ply roof; mushroom system reinforced concrete floor construction; direct steam heat; electric lights; prismatic vault lights; electric freight elevator of 2500-lb. capacity; cost \$50,000; let contract to Arkansas Electric Co., Little Rock, for electric work and M. B. Sanders, Little Rock, for plumbing and heating; Mann & Stern, Architects, Little Rock. Address general contractor. (Previously noted.)

Fla., Jacksonville.—Salvation Army let contract to erect building to contain stores, etc. (See Miscellaneous Structures.)

Fla., Jacksonville.—O. P. Woodcock has contract to erect store and office building (See Bank and Office.)

Fla., Tarpon Springs.—A. Leouis let contract to H. M. Grammar for foundation for store, office and hall building, and to W. C. Henry, St. Petersburg, Fla., for superstructure; 50x60 ft.; 2 stories; 3 storerooms; brick; tin, paper and gravel roof; first floor cement, second double wood; electric lights; cost \$5800.

Ga., Riddleville.—J. Y. Bryan let contract to erect 2-story twin mercantile buildings; 40x60 ft.; galvanized roof; stove heat; cost \$3750; gasoline lighting, \$75; J. W. Marchman, Archt., Milledgeville, Ga. (Lately noted.)

La., Bogalusa.—E. R. Cassidy let contract to Montague Bros., Abbeville, La., to erect store and office building; 95x85 ft.; mill construction; composition roof; sanitary and cement floors; vapor vacuum heat; electric lights; cost about \$30,000; Wm. R. Burk, Archt., New Orleans. (Lately noted.)

Miss., Winterville.—B. B. Payne & Co. let contract to H. N. Alexander & Sons, Greenville, Miss., to erect store building; 1 story; brick; 50x100 ft.; concrete foundation; Barrett roof; cement floors; stove; gas lights; cost \$9255; W. H. Parker, Archt., Greenville, Miss.

N. C., Winston-Salem.—W. H. Watkins let contract to Fogle Bros. Co., Winston-Salem, to erect store building; 50x50 ft.; brick; pebbled roof; concrete floors; cost \$3500; W. C. Northrup, Archt., Winston-Salem. (Lately noted.)

S. C., Sumter.—S. H. Kress & Co., 350 Broadway, New York, let contract to J. M. Harby, Sumter, to erect store building; 48x125 ft.; 2 stories and service basement; brick and frame; Barrett specification roof; wood beams and flooring; electric and gas lights from Public Service Corporation; cement sidewalks; hand-power elevator; cost \$24,000; steam radiators, \$1450; Seymour Burrell, Archt., 350 Broadway, New York. Address contractor. (Lately noted.)

Tenn., Memphis.—Henry Halle & Bro., 55 N. Main St., let contract to Fred Young, Memphis, to erect building; front 2 stories; rear 1 story; brick and mill construction; Carey roof; concrete and wood floors; cost \$20,000; heating, \$600; electric elevator, \$1500; Jones & Furbringer, Architects, Memphis.

Tex., Quinlan.—Barrow Bros. have plans Tex., Honey Grove.—Bonham Wholesale Grocery Co., Bonham, Tex., has plans by Sparger & Peters, Bonham, and let contract to J. A. Fulghum to erect business building; 1 story; 40x100 ft.; brick; composition roof; concrete floors; cost \$4500.

by George Lindsey and let contract to S. D. Stetler, both of Greenville, Tex., to erect 1-story brick store; cost \$8000.

Tex., Wichita Falls.—J. Hamlin Morgan let contract to Taylor Bros., Wichita Falls, to erect business building; 1 story, 50x50 ft.; 4 store fronts; cost \$8200; Field & Clarkson, Architects, Wichita Falls.

Va., Newport News.—J. V. Bickford let contract to R. V. Richardson, Hampton, Va., to erect building to contain 3 storerooms and 2 offices; brick; steam heat.

WAREHOUSES

S. C., Columbia.—Standard Warehouse Co. let contract to W. B. Summerset, Columbia, to erect cotton warehouse; 100x300 ft.; brick; gravel roof; wood floors; cost \$18,000.

Tex., Orange.—Sabine Supply Co., let contract to J. C. Jopling & Bro., Corsicana, Tex., to erect warehouse; fireproof; Barrett specification roof; cost \$36,500; C. H. Page & Bro., Architects, Austin. (Lately noted.)

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Air Compressor.—See Mining (Zinc), Machinery, etc.—Osage Zinc Co.

Aquarium.—I. J. Beckett, Panama City, Fla.—Data and prices on aquarium for amusement pavilion.

Bank Fixtures.—W. D. LaRoque, Kinston, N. C.—Prices on safe and other bank fixtures.

Bank Fixtures.—Citizens Savings & Loan Co. of Logan, Noonan Jackson, Prest., Logan, W. Va.—Prices on railings and stationary furniture for bank.

Blowers.—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids on 4 blowers, 5000 cu. ft. air per min., Schedule 565, delivery Brooklyn.

Blower System.—See Woodworking Machinery, etc.—Mutual Casket & Coffin Factory.

Boilers.—Lighthouse Inspector, Charleston, S. C.—Bids until Jan. 25 to construct 2 marine boilers of gunboat type.

Bolts, etc.—Bureau Supplies and Accounts, Navy Dept., Washington, D. C.—Bids until Jan. 16 for delivering bolts and screws at navy-yard, Washington.

Brick.—See Building Materials, etc.—T. J. Daniel.

Bricks.—Cram Engineering Co., Baltimore, Md.—Addresses of central and far South manufacturers of common and fire brick for constructing oxygen-manufacturing plants.

Bridge Construction.—See Drainage.—Snow Creek Drainage Dist.

Bucket (Dredge).—A. C. Tuxbury Lumber Co., P. O. Box 843, Charleston, S. C.—12 to 15 cu. ft. orange peel bucket.

Building Materials.—Southern Pipe & Culvert Co. (for Ajax Clay Works), Ga. Life Bldg., Macon, Ga.—Materials for 170x60 ft. mill construction building.

Building Materials, etc.—G. M. McDonough, Box 844, Tampa, Fla.—Interested, with view to representation, in following: Rolling steel shutters, steel sash, granite, limestone, hollow tile, gypsum block, elevators, architectural terra-cotta, metal lockers, building hardware and general fireproof materials and other high-grade specialties for residences.

Building Materials.—A. S. Cordy, Secy. Capitol Comm., Jackson, Miss.—Bids on plastering, partitions, millwork, painting, glazing, iron railings and ornamental iron and stucco work.

Building Materials.—Fayette O. Kirby, Consol. Engr., San Antonio, Tex.—Prices on building materials.—See Engineering Equipment, etc.

Building Materials.—T. J. Daniel, Leesburg, Fla.—Prices on brick, tile roofing and other materials.

Canning Equipment.—Geo. W. Wrennick, Leesburg, Fla.—Data and prices on canning and preserving equipment, cans, glasses, bottles, labels, etc.

Canning and Preserving Machinery.—F. W. Garrett, care of Bear & Co., Wilmington, N. C.—Data, including cost and operating expense, on establishment of canning and preserving plant; catalogue and prices on machinery.

Carts.—John G. Duncan Co., 308 W. Jackson Ave., Knoxville, Tenn.—Addresses of manufacturers of 2-wheeled log-carts or ox-carts.

Clayworking Equipment.—Southern Pipe & Culvert Co. (for Ajax Clay Works) Ga. Life Bldg., Macon, Ga.—Equipment for daily output 60 tons fire brick, hollow blocks, silt blocks and tile.

Chain Machinery.—W. D. Simmons, High Point, N. C.—Data and prices on chain making machinery and special light chains.

Cone (Ice-cream) Equipment.—Wilson Produce Co., Corsicana, Tex.—Machinery to manufacture ice-cream cones.

Containers and Packages.—Dezeli Enterprise Co., Greensboro, Fla.—Prices on containers for lard, sausage, etc.; also parcel post packages for sausage and souse.

Cold-storage Plants.—Joplin Hay Co., Box 342, Webb City, Mo.—Data on erection and maintenance of cold-storage plants for produce plants; prices on machinery.

Cookers (Steam).—See Power Plant Equipment, etc.—Baptist Sanitarium and Hospital.

Crusher, Screens, etc.—Agricultural Lime Co., Box 451, Stevens Pottery, Ga.—

Data and prices on new or second-hand crusher, engine, screens, etc.

Crushers.—See Mining (Graphite) Machinery.—Great Southern Graphite Co.

Drainage.—Snow Creek Drainage Dist. Commrs., H. R. Cowles, Secy., Statesville, N. C.—Bids until Jan. 8 to construct 11 mi. dredged ditches containing 363,000 cu. yds. earth, and 2 highway bridges; plans and specifications at offices of Commrs., Statesville, and W. D. Alexander, Engr., Charlotte.

Dredging.—U. S. Engr. Office, Custom House, Norfolk, Va.—Bids until Jan. 29 to dredge southern branch of Elizabeth river.

Drills.—See Mining (Zinc) Machinery, etc.—Osage Zinc Co.

Dryer.—Geo. H. Cook, Brunswick, Ga.—Second-hand closed or steam jacketed dryer for fertilizer material similar to fish scrap.

Dryer (Rotary).—Marlbrook Lime Co., First National Bank Bldg., Roanoke, Va.—Second-hand rotary dryer, 40 ft. long, 4 ft. diam.; good condition; prompt delivery.

Dryer (Veneer).—See Woodworking Machinery.—John G. Duncan Co.

Dump.—See Wagons (Pit), etc.—Scott Run Coal Co.

Electric Motors.—See Mining (Graphite) Machinery.—Great Southern Graphite Co.

Electric Plant.—Colonial Lumber Co., J. D. Wyrick, Mgr., Bearden, Tenn.—Bids until Jan. 31 to furnish and install 3 mi. wiring, 300 to 500 lights; poles and generating power to be supplied by Colonial Lumber Co.; will also consider complete 50 H. P. plant for sawmill and electric lighting, gas engine to be used, the gas to be made from slack coal.

Electrical Equipment.—A. S. Cordy, Secy. Capitol Comm., Jackson, Miss.—Prices on electrical equipment for \$125,000 State Capitol building.

Electrical Equipment.—See Woodworking Machinery, etc.—Mutual Casket and Coffin Factory.

Electrical Equipment, etc.—Panama Canal, Earl I. Brown, Gen. Pur. Officer, Washington, D. C.—Bids until Jan. 16 to furnish door and window hardware, slate blackboards, electric cable, wire, transformers, panel boards, ammeters, voltmeters, electric fixtures, electrical attachments, fire-alarm boxes, gasoline torches, pliers, drill points, lamp carbons, insulating paper, pot-head compound, burnishing paste and lacquer; blanks and general information relating to this circular (No. 1111) may be obtained from this office or offices of assistant purchasing agents, 24 State St., New York; 614 Whitney-Central Bldg., New Orleans; and Fort Mason, San Francisco; also from U. S. Engr. offices in Seattle, Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Milwaukee, St. Paul, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill., and Commercial Club, Tacoma, Wash.

Electrical Machinery.—Bureau, Yards and Docks, Navy Dept., F. R. Harris, Chf., Washington, D. C.—Bids until Jan. 22 for electric lighting and power system for structural shop at navy-yard, Norfolk. Plans and specification on application to Bureau or to Commandant of navy yard.

Electrical Machinery.—Southern Pipe & Culvert Co. (for Ajax Clay Works), Ga. Life Bldg., Macon, Ga.—10, 25 and 75 H. P. A. C. 3-phase 440 or 550-volt, 60-cycle, 3-phase motors.

Electrical Machinery.—Bureau Supplies and Accounts, Navy Dept., Washington, D. C.—Bids until Jan. 16 for furnishing and installing exhaust system and delivering ammeters, voltmeters, annunciators, electrical supplies, etc., and turbo generating sets at navy-yard, Boston. Apply for proposals to supply officer, Boston, or to Bureau.

Electrical Machinery.—Bureau Supplies and Accounts, Navy Dept., Washington, D. C.—Bids until Jan. 16 for furnishing and installing exhaust system and delivering ammeters, voltmeters, annunciators, electrical supplies, etc., and turbo generating sets at navy-yard, Boston. Apply for proposals to supply officer, Boston, or to Bureau.

Elevator.—See Mining (Graphite) Machinery.—Great Southern Graphite Co.

Elevators.—See Building Materials, etc. G. M. McDonough.

Engine.—Gray Bros., Woodford, Va.—Second-hand 50 H. P. center crank steam engine; first-class condition.

Engine.—See Crusher, Screens, etc.—Agricultural Lime Co.

Engineering Equipment, etc.—Fayette O. Kirby, Consol. Engr., San Antonio, Tex.—Data and prices on equipment and materials of interest to engineers; also interested in warehouse equipment and in building materials, especially for residences costing \$20,000 to \$40,000.

Feed Mill Machinery.—Farmers Cotton Oil & Trading Co., Uniontown, Ala.—Correspondence with manufacturers of feed mill machinery.

Fire Escapes.—Valdosta Fire Dept., T. M. Cook, Jr., Chief, Valdosta, Ga.—Addresses of manufacturers of fire escapes.

Graphite Plant.—Alex. McIntyre, 1426 Phelan St., Birmingham, Ala.—Plans, specifications, estimates, etc., on \$35,000 graphite plant.

Hardware.—See Building Materials, etc. G. M. McDonough.

Heating Plant (Steam).—Moses Solomon, Prop. Apartment Garage Co., Bayard and Nanticoke Sts., Baltimore, Md.—Prices on steam heat for garage.

Hoist.—John G. Duncan Co., 308 W. Jackson Ave., Knoxville, Tenn.—Jobbers' cash price on 8½x10 double cylinder double drum hoist, with boiler for Hartford inspection; immediate shipment.

Hoist (Mine).—United States Manganese Corp., Elkton, Va.—Lidgerwood mine hoist; 30 to 40 H. P.; first-class condition.

Iron Railings and Ornamental Iron.—See Building Materials.—A. S. Cordy.

Jetty Repairs.—U. S. Engr.'s Office, Galveston, Tex.—Bids until Jan. 24 for jetty repairs at Port Aransas; information on application.

Kiln (Dry).—Tuleta Mercantile Co., Tuleta, Tex.—Data and prices on dry kiln for curing hay, drying sweet potatoes, beans and other farm crops.

Knitting Equipment.—E. G. Morrison, Lawndale, N. C.—To correspond with manufacturers of hosiery knitting machinery.

Knitting Machinery.—J. M. Hatch, Box 292, McColl, S. C.—Correspondence with manufacturers of hosiery mill machinery.

Lamps (Kerosene, Mantle).—Butler, Browne & Benton, Richmond, Va.—Data and prices, from manufacturers, on kerosene lamps with mantles and chimneys.

Laundry.—Baptist Sanitarium and Hospital, D. R. Pevoto, Supt., Houston, Tex.—Prices on steam laundry equipment. (See Power Plant Equipment, etc.)

Lighting Fixtures.—M. C. Moore, Pur. Agt., New River Co., Macdonald, W. Va.—Prices on lighting fixtures for \$25,000 office building.

Lockers (Metal).—See Building Materials, etc.—G. M. McDonough.

Lumber.—Southern Pipe & Culvert Co., (for Ajax Clay Works), Ga. Life Bldg., Macon, Ga.—Lumber for 170-60 ft. mill construction building.

Machinery, etc.—Kedarnath Baboolall, Cawnpore, India.—To represent manufacturers of cottons, woollens, linen, silks, embroidery (piece goods); cycles and accessories; stationery; hardware; machinery, etc.

Manufacturers.—Em. Jackson, agent, Cape Hayti.—To represent manufacturers of: Provisions, tobacco, stationery, preserves, canned meat, perfumery, drugs, pianos, organs and buggies.

Manufactures.—Brown, Brown & Co., 14 Periana Maistry St., Georgetown, Madras, India.—To represent manufacturers of various classes of products suitable for Indian trade.

Metals.—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids to furnish 2000 lbs. Muntz metal rolled angles, Schedule 570, delivery Philadelphia; commercial sheet brass, Schedule 577; 25,900 lbs. sheet lead, in rolls, and 2200 lbs. ¾-in. wire, half and half solder, Schedule 570; and lap welded casing steel, Schedule 565, delivery Brooklyn; bar copper, and 1000 lbs. commercial sheet brass, Schedule 584, delivery Mare Island; 100,000 lbs. pig lead, Schedule 570, delivery Norfolk; 655 steel, afterbody shells, Schedule 564, delivery Newport; sheet tin, Schedule 570, delivery Boston, Norfolk.

Metal Ceilings.—B. E. and L. H. Grandy, Bamberg, S. C.—Catalogues and prices on metal ceiling for \$5000 church at Brunson, S. C.

Millwork.—See Building Materials.—A. S. Cordy.

Mining Machinery.—See Graphite Plant.—Alex. McIntyre.

Mining (Graphite) Machinery.—Great Southern Graphite Co., H. O. Moore, Pres., 402 Jefferson County Bank Bldg., Birmingham, Ala.—Bids (preferences to be given for immediate and short time deliveries) on following: 1 gyratory and 1 jaw crushers; 3 rolls; 3 screens; 7 elevators; 5 550-volt, 60-cycle, 3-phase A. C. motors, including 1 100 H. P. and 2 75 H. P. high speed, 1 50 H. P. and 1 25 H. P.; 6 buhr stone mills; 8 finishing reels; transmission; 1 pump; 12 pit cars; 1000 ft. second-hand rails; rotary dryer; 500 to 1000 ft. cast iron pipe, and lumber; new, or used first-class condition; for mines Lineville, Ala.

Mining (Zinc) Machinery, etc.—Osage Zinc Co., J. W. Ellis, V.-P., Webb City, Mo.—Prices on 500-ft. compressor, ground steel, steel rails, 1250-lb. tubs, ground drills and cars.

Motors (Water).—John P. King Mfg. Co., Augusta, Ga.—Addresses of manufacturers of water motors (not water turbines) developing 5 to 10 H. P.

Nut Cracker Manufacture.—Cyrus Marsh, Virginia Beach, Va.—Correspondence relative to placing order for manufacture of patented nut cracker especially adapted to pecans.

Overall Machinery.—John T. Worthy, Alexander City, Ala.—Data and prices on sewing machines and other equipment for overall factory.

Partitions.—See Building Materials.—A. S. Cordy.

Paving, etc.—Board of Awards, Baltimore.—Bids until Jan. 10 for: 135,000 cu. yds. grading; 28,000 cu. yds. sheet asphalt; 5000 cu. yds. granite paving; 80x70-ft. reinforced concrete bridge with 2 spans of 40 ft. each and abutments; all for third section of Key Highway and intersecting streets; specifications, etc., at office Harbor Board, H. K. McCay, Harbor Engr., Broadway Pier, and obtainable for \$10.

Pipe (Sewer).—Hubbard Lumber Co., Harlan, Ky.—Prices on 2 ml. 4-in. to 24-in. sewer pipe; will purchase not later than Jan. 15.

Pipe Stem Machinery.—Thos. W. Gould, Gen. Contr., Arlington, Tenn.—To correspond with makers of machinery for manufacturing reed or cane pipe stems.

Plastering.—See Building Materials.—A. S. Cordy.

Power Plant Equipment, etc.—Baptist Sanitarium and Hospital, D. R. Pevoto, Supt., Houston, Tex.—To ask bids about Feb. 1 for duplicate boiler and generating plant, oil burners, hot water storage, etc., for complete power plant; also refrigeration, steam cooking and steam laundry.

Printing Machinery.—Co-Operative Publishing Co., Box 295, Beckley, W. Va.—Prices on equipment for printing plant.

Printing Machines.—See Saws, etc.—Bureau Supplies and Accounts.

Rails.—See Mining (Zinc) Machinery, etc. Osage Zinc Co.

Rail.—Scott Run Coal Co., C. I. Lautz, Mgr., Morgantown, W. Va.—Prices on new or second-hand 5 to 20-ton 16-lb. rail, switches and splice bars.

Refrigerating Plant.—Dezell Enterprise Co., Greensboro, Fla.—Prices on 2-ton refrigerating plant.

Refrigerating Machinery.—See Baptist Sanitarium and Hospital, D. R. Pevoto, Supt., Houston, Tex.—Prices on refrigeration. (See Power Plant Equipment, etc.)

Road Construction.—Lawrence County, J. G. Richardson, Secy., Walnut Ridge, Ark.—Bids on construction 30 ml. rock road; \$100,000 available; F. A. Pritchett, Engr.

Road Construction.—Knox County Fiscal Court, Read P. Black, Clerk, Barbourville, Ky.—Bids until Jan. 6 to grade earth-crowned roads from fork of road near Cemetery to River bridge above Artemus, Ky.; from fork of road at Old Flatlick to mouth of Road Fork of Stinking Creek; from corporate limits of Barbourville to mouth of Heltons Fork on Indian Creek; total about 15 ml.

Road Construction.—Franklin County Court, Judge Reeves, Mt. Vernon, Tex.—Bids until Jan. 4 for constructing system of highways with bridges, culverts, etc., for Franklin County Road Dist. No. 1; contemplated expenditure \$75,000; plans, specifications, etc., on file.

Roofing.—Southern Pipe & Culvert Co., (for Ajax Clay Works), Ga. Life Bldg., Macon, Ga.—Roofing materials for 170x60 ft. mill construction building, etc.

Safe.—See Bank Fixtures.—W. D. La Roque.

Saws, etc.—Bureau Supplies and Accounts, Navy Dept., Washington, D. C.—Bids until Jan. 16 for delivering lathes, printing machine, band saws, saw table and wood trimmers at Navy-yard, Philadelphia. Apply for proposals to supply officer, Philadelphia, or to Bureau.

Sawmill.—See Woodworking (Veneer) Machinery.—Tennessee Lumber & Veneer Corp.

Sawmill.—John G. Duncan Co., 308 W. Jackson Ave., Knoxville, Tenn.—Jobbers' prices, for quick shipment, on second-hand 7-ft. band sawmill.

Scale (Wagon).—Dezell Enterprise Co., Greensboro, Fla.—Prices on good wagon scale.

Sewing Machines.—See Woodworking Machinery, etc.—Mutual Casket & Coffin Factory.

Sewing Machines.—See Overall Machinery.—John T. Worthy.

Silica.—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids on 400 tons crushed silica, peanut size, Schedule 577, delivery Norfolk.

Steel Shutters and Sash.—See Building Materials, etc.—G. M. McDonough.

Stucco Work.—See Building Materials.—A. S. Cordy.

Telephone Outfit.—M. C. Moore, Pur. Agt., New River Co., Macdonald, W. Va.—Prices on intercommunicating telephone outfit for \$25,000 office building.

Toothpick Machinery.—L. Baggett, Tabor, N. C.—Data and prices on toothpick machinery.

Vault Doors.—M. C. Moore, Pur. Agt.,

New River Co., Macdonald, W. Va.—Prices on vault doors for \$25,000 office building.

Wagons (Pit), etc.—Scott Run Coal Co., C. I. Lautz, Mgr., Morgantown, W. Va.—Prices on 15 to 20 pit wagons; also chute dump.

Warehouse Equipment.—See Engineering Equipment, etc.—Fayette O. Kirby, San Antonio, Tex.

Water-wheels, etc.—L. Baggett, Tabor, N. C.—Addresses of manufacturers of water-wheels or turbine wheels.

Welding (Electric) Machinery.—E. W. A. Woolard, Washington, N. C.—Prices on electric welding outfit.

Woodworking Machinery.—L. B. Skinner Mfg. Co., Dunedin, Fla.—Second-hand 12-in. wide molder; first-class condition.

Woodworking Machinery, etc.—Mutual Casket & Coffin Factory, Fayetteville, N. C., A. L. Garrett, Secy. (Mr. Garrett's address until Jan. 5, Greensboro, N. C.).—Prices on boiler for drykline, blower system, woodworking machinery, sewing machines, drykline outfit, glue-room equipment and electrical equipment.

Woodworking Machinery.—John G. Duncan Co., 308 W. Jackson Ave., Knoxville, Tenn.—Jobbers' prices (for quick shipment) on veneer sawmill; veneer slicer; veneer dryer of large capacity; 100-in. veneer lathe; one or more veneer clippers.

Woodworking (Veneer) Machinery.—Tennessee Lumber & Veneer Corp., Johnson City, Tenn.—Prices on rebuilt machines, including 7-ft. band sawmill, veneer sawmill, veneer slicer, veneer dryer of large capacity, 100-in. veneer lathe and one or more veneer clippers.

RAILROAD CONSTRUCTION

RAILWAYS

Ark., Fort Smith.—South Side Terminal Railway Co. is reported organized to build lines in the industrial section of the southern part of the city. Chamber of Commerce may be able to give information.

Ark., Fort Smith.—Fort Smith Light & Traction Co., it is reported, will begin construction immediately of an extension from South Fort Smith to Van Buren, Ark., about 12 ml. H. C. Hoagland, Fort Smith, is Gen. Mgr.

Fla., Monticello.—Atlantic Coast Line, according to a local report, will begin construction early in 1917 upon its contemplated extension from Monticello to Perry, Fla., about 30 ml. Wade, Clower & Wade of Sebring, Fla., are said to have the contract. J. E. Willoughby, Wilmington, N. C., is Ch. Engr.

Ga., Bolingbroke.—Preston-Small Construction Co., Georgia Casualty Bldg., Macon, Ga., will build a spur track from its quarry above Holton, Ga., to a connection with the Central of Georgia Railway at or near Bolingbroke, 5½ ml.

Ky., Covington.—Covington Industrial & Interterminal Railroad Co., capital stock \$100,000, is incorporated to build delivery tracks through industrial sections of Covington; incorporators, C. R. Houston, H. M. Houston, J. B. Stanwood, T. R. Herrick, J. E. Shepard, Joseph Behle and Alfred Ehlmann.

La., Alexandria.—Miltonberg & Southeastern Railroad Co. publishes its charter to build a line from Miltonberg, La., several miles west of Alexandria, to a connection with the St. Louis, Iron Mountain & Southern Railroad, about 8 ml. south of Alexandria, this construction to amount to about 10 ml.; also from Miltonberg west to Leesville, La., about 40 ml., with right to build extensions in either direction; capital stock, \$100,000; incorporators, Walter D. Brewer, Pres.; Nauman S. Scott, Vice-Prest.; Ernest Bullington, Secy.-Treas.; Geo. B. Morley, W. A. Brewer, Mrs. Henry Neuestedt, A. H. Morley, Frank D. Ewen and E. W. Glynn. G. B. Morley is the largest stockholder, other holders of large amounts of shares being the four next mentioned, besides W. D. Brewer.

La., Clarks.—Ouachita & Northwestern Ry. is reported building a line from Clarks to Standard, 10 ml. C. E. Slagle is Secy. and Gen. Mgr.

Md., Baltimore.—Baltimore & Sparrows Point R. R. will build an extension under the name of the Patapsco & Back River R. R., the new track to be a loop near Sparrows Point. G. R. Sinnickson, Union Station, Baltimore, is Supt.

Md., Hagerstown.—Cumberland Valley Railroad is reported to have bought 53 acres of

land in the suburbs and will lay additional tracks. T. B. Kennedy, Chambersburg, Pa., is Chief Engr.

Miss., Meridian.—J. T. M. Hamilton will begin survey immediately for the construction of the Meridian & Bigbee Railway, from Meridian eastward to the Tombigbee River in Alabama, about 42 ml., but construction projected for 1917 is from Meridian only as far as a connection with the Alabama, Tennessee & Northern Railway, about 27 ml. S. A. Neville, Meridian, is Pres.

Mo., Kansas City.—Gaston Railway Syndicate, Scarritt Bldg., Kansas City, is reported interested in plans to build a line from Kansas City via Butler and Rockville to Springfield, Mo., about 150 ml. Saml. J. McWilliams is Secy.

Okla., Ardmore.—Concerning the recent report that the Gulf, Colorado & Santa Fe Railway was surveying from a point near Ardmore to the new oil fields near Wirt, Okla., it is stated from an authoritative source that no line has been chartered nor is any contemplated at present. F. Merritt, Galveston, Tex., is Chief Engr.

Okla., Muskogee.—Midland Valley R. R. is reported surveying for an extension from Muskogee to Drumright and Cushing, Okla., about 80 ml. C. Kaighn, Muskogee, is Ch. Engr.

Tex., Lubbock.—Contract for the construction of the South Plains & Santa Fe Ry. (Santa Fe System) from Lubbock via Brownfield, Tex., to a point about 65 ml. southwest of Lubbock is reported let to John Scott & Son of St. Louis. Work will begin immediately, and it is expected to start tracklaying about Mch. 1. F. M. Bisbee, Amarillo, Tex., is Ch. Engr.

Va., Norton.—Interstate Railroad Co. is reported to have completed survey for an extension from Norton to the headwaters of Guests River, 10 ml. to develop coal lands of the Virginia Iron, Coal & Coke Co. B. E. Rhodes is Chief Engr. at Appalachia, Va.

Va., Stanardsville.—E. F. Benedum, heading a corps of engineers, is making a survey from Wolfville, via Stanardsville, to Barbourville, Va., looking to the construction of a railroad, which would be about 18 ml. long. Another survey is said to be contemplated from Wolfstown to Orange, Va., about 15 ml.

STREET RAILWAYS

Ala., Montgomery.—The Alabama Traction Co., C. G. Abercrombie, Pres., has applied to the City Commission for an extension of time to build its proposed street railway. It is stated that negotiations are progressing in New York to finance the plan. A small amount of track has been built.

INDUSTRIAL NEWS OF INTEREST

Items of news about industrial, railroad or financial interests, building operations, construction work, municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest, are invited from our readers whether they are advertisers or subscribers or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

Sales Manager Appointed.

The appointment of William Fisher Jennings to be eastern sales manager of the Bound Brook (N. J.) Oil-Less Bearing Company is announced by George O. Smalley the vice-president and general manager. Mr. Jennings has been connected with the company for nearly three years during which his popularity has become well and widely established.

Change of Location.

Dufur, Baggett & Co., manufacturers of brass and steel wire work, Baltimore, announce a change of address from 225 West Saratoga St., to 403 North Paca St., where they have larger and better quarters which will enable them to handle orders more promptly. They make screens and railings for banks, elevator enclosures, elevator cabs, counter railings, grills, wickets, guards, partitions, skylight protectors, etc.

Insurance Policies as Holiday Gifts.

F. E. Myers & Bro., manufacturers of force and lift pumps, hay tools, etc., Ashland, O., have announced a holiday gift to everyone of their employees, excepting traveling men, in the form of an insurance policy covering accident and life. It begins at \$500 and increases each year \$100 until a maximum of \$1000 is reached. The insurance is given without medical examination. Arrangements have been made with the Travelers' Insurance Co. of Hartford, Conn., to carry the plan into effect, and it will include not only those employees now connected with the factory, but others who may hereafter join its forces. The sanitary surroundings and the safety devices at the plant are said to be of the very best.

To Make Filters and Kindred Products.

The Blackburn-Smith Corporation, 105 West 40th St., New York, through its purchase of the filter department of James Beggs & Co., has acquired all patents, records, patterns and rights for the manufacture and sale of the Blackburn-Smith Feed Water Filter and Grease Extractor and the Blackburn-Smith Sewage Ejector System. The engineers and agents previously identified with these products have been taken over in a body by the new corporation and will in future work under the direction of Irwin H. Kaufman, Vice-President, who has supervised the manufacture, sale and installation of the Blackburn-Smith filter for the last 10 years.

New Electric Power Station.

W. S. Barstow & Co., Inc., Engineers, 50 Pine St., New York, have just completed an electric power station for the New Jersey Power & Light Co., of Dover, N. J. It is equipped with one 3500 K. W. (4400 K. V. A.) General Electric, 60-cycle, turbo generator, three Babcock & Wilcox boilers of 500 H. P. each, operating at 210 pounds pressure with 150 degrees superheat; Westinghouse underfeed stokers; Sturtevant forced draught blowers, and two Jeannette centrifugal boiler feed pumps with a capacity of 200 gallons per minute. Coal is delivered from a trestle 500 feet long that has been built alongside of the powerhouse. The stack is 200 feet high and is 12 feet in diameter inside. It is of radial brick and was built by the M. W. Kellogg Company. The plant will partly supplant the company's station at Boonton, N. J.

Death of W. C. Stevens, a Pioneer in Southern Clay Products.

Stevens Bros. & Co., manufacturers of clay products, Stevens Pottery, Ga., announce the death of W. C. Stevens, president of the business, who was connected with it from the time of its establishment by his father in 1881. He was a pioneer in the manufacture of clay products in the South, and his whole life was given up to the industry of which he has been the head for the last few years. He was a man who stood for all good and honorable things, and was highly regarded by everyone who knew him, none giving him their respect and esteem in greater degree

than did his competitors in business. Mr. Stevens had not been actively engaged in business for some time before his death, because of illness, and his duties were performed by his brother, J. H. Stevens, the vice-president, also a pioneer in the clay-product industry, and who succeeds him as president of the concern.

Percentage Bonus to All Employees.

The L. S. Starrett Co., Athol, Mass., manufacturers of the well and widely known Starrett tools, has voted to pay to each person in its employ an additional percentage of the total amount of wages paid to them during the year 1916, payments to be made as soon after January 1 as possible in the following proportion: To employees of one year or less, 2 per cent.; employees of over one to less than three years, 3 per cent.; over three but less than five years, 4 per cent., and five years or more 5 per cent. The company remarks in this connection that it has received during the year orders for far more goods than it could make but that profit has not kept pace with the increase of business because prices of material, supplies and everything else purchased have enormously advanced. It is disposed, nevertheless, to make a larger distribution than the two per cent. paid on three previous occasions, and feels that employees who have been with it the longest should receive more than those with its force but a short time.

Many Installations of Refrigerating Machinery.

The York Manufacturing Company, York, Pa., builders of refrigerating machinery, etc., have made more than 90 installations of their products at sundry places since October 20 including the following in the South: C. O. Roberts, market; Popular Dry Goods Co., Patterson's restaurant, and the Cameron Packing Company, all at El Paso, Tex.; Turner Produce Company, Chickasha, Okla.; Florida Fruit Products Company, Haines City, Fla.; Schumacher Company, wholesale grocers, Houston, Tex.; Houston Ice Company and Galveston Model Dairy Co., Galveston, Tex.; Big Four Ice & Cold Storage Co., Waco, Tex.; Kratzer Ice Cream Company, Montgomery, Ala.; Richmond Market, Baltimore, Md.; J. C. Ritter, dairy, Covington, Ky.; Culpepper Produce Co., Culpepper, Va.; John Schehl, meats, Wellsburg, W. Va.; J. Reynier & Son, grocers, Newport News, Va.; Slidell Shipbuilding Co., Slidell, La. (for various ships); Southern Ice Company, Columbus, Ga., and Retail Grocers Ice Co., Little Rock, Ark.

"Lacquer-All" Now at Detroit.

The Lacquer-All Company announces the removal of its factory from Dallas, Tex., to Detroit, Mich., where it is now located at 86 Jefferson Ave., corner of Wayne street. It is equipped to manufacture a varnish, which it says will not "check, craze or crack," because it does not contain any rosin, turpentine, linseed oil or soya bean oil. In this the company claims to have found one of the lost arts, for three or four thousand years ago there was made a varnish that did not "crack or dye"; turpentine and linseed oil were not employed then, hence the use of other products which gave the desired results.

Describing the origin of the varnish which it produces, the company says that in 1910 S. W. Summers of Dallas perfected a formula after four years of difficult work and study. He spent \$40,000 to attain his results, but he died soon after it was completed. His two sons, H. W. Summers and R. W. Summers, who are members of the Lacquer-All Company, know this formula, and it is therefore able to manufacture not only a non-checking varnish, but a paint that is proof against the action of salt water or acid fumes. This can be used successfully for painting the hulls of vessels, for neither water nor air affect it. The plant also manufactures a weatherproof "lamp dip." It is not affected by either heat or cold, rain or snow, because it does not contain any

articles undesirable in varnish; neither does it include any dryers of various compositions. "Lacquer-All," which was perfected by Mr. Summers, is the base of the several products of the company, and it gives them quick drying properties, producing a hard, enamel-like surface, both elastic and durable. It is used for painting and varnishing vehicles of all kinds, besides being employed for many other purposes too numerous to mention. The company also makes structural paints, fire-proof paints, liquid lead, liquid cement, plaster lac, bronzing liquid, etc.

TRADE LITERATURE.

A Useful Gift.

The Cincinnati Iron and Steel Company, Cincinnati, Ohio, manufacturers of lathes and dealers in iron and steel products, are sending what they term a "remembrance" to their customers in the form of a very attractive and unique thermometer. It is circular in shape with an unusually clear reading scale and pointer all in white upon a black background. It is mounted in an oxidized metal case.

Electric Industrial Trucks.

Samuel L. Moore & Sons Corporation, Elizabeth, N. J., has issued Bulletin No. 103, describing and illustrating its Crescent Electric Industrial Truck, which it is said does the work of ten ordinary hand trucks and will take a 20 per cent. grade. Moreover, it is capable of hauling trailers so that the load to be transported can be increased over and above the capacity of the truck itself. These trucks are designed for use in manufacturing plants, warehouses, railroad terminals or in fact, anywhere that materials have to be moved in quantities.

Columbia Rope Described.

The Columbia Rope Company, Auburn, N. Y., issues "Cord No. 2, Seventh Fathom," of its monthly publication known as "The Salesmanship of the Columbian Crew." It is entertainingly written and attractively illustrated, showing in an interesting way some of the many uses to which the Columbia products are applied. Suggestions as to window displays are given by picture, while other hints concerning the use of rope are also presented through cuts displaying actual experiences.

Western Electric Co. Year Book.

The Western Electric Company, Incorporated, 195 Broadway, New York, has issued its electrical supply year book for 1917. This valuable publication contains more than 1300 pages and is well printed and profusely illustrated, covering the multitude of products manufactured by the company. It is noted, however, that while the uniform discount of 50 per cent. that is announced from the list prices in the volume will give the approximate cost to the trade of any article catalogued, prices, nevertheless, are subject to frequent change on the present rising market. Quotations should, therefore, be obtained from salesmen or from any of the offices of the company for any considerable quantity of material. The book is equipped with an alphabetically-arranged index, besides with instructions as to buying and shipping goods.

Automatic Electric Circuit Breakers.

The Automatic Reclosing Circuit Breaker Company, Columbus, Ohio, in Bulletin No. 10, tells why automatic reclosing circuit breakers should be used, saying that they reduce abuse to electrical equipment, eliminate unnecessary loss of time and furthermore, provide safety for linemen and operators. A fourth advantage is that automatic operation of sub-stations is made possible. It is observed that these instruments have many advantages over the hand-operated or the remote-control breaker, because a circuit breaker which does not reclose until the short circuit or overload conditions are removed does not subject the electrical apparatus to repeated strains. Every time a breaker of hand-operated type is closed on a dead short circuit the equipment is subjected to the same strain as when the breaker first opened. The automatic breaker is in itself sensitive to load conditions and automatically avoids closing until conditions are right. Illustrations show the automatic breakers and a smaller folder describes and illustrates relays for use in connection with them.

Self-Cleaning Underfeed Stokers.

The Moloch Stoker Company, Chicago, Ill., in a recent bulletin gives illustrations and descriptions of its self-cleaned, underfeed stoker in which fresh coal is fed underneath the fire, no means whatever being provided for overfeed burning such as moving or stationary grates. The underfeed principle is completed by the refuse disposal mechanism, which is placed where the refuse must be deposited as the fire burns. Every bit of fuel in the furnace, it is said, travels the same distance after being coked on its way through the fire before depositing its non-combustible matter. By these means all fuel is given equal opportunity to be wholly consumed and the refuse is at no time an interference to the air supply of the combustion. The rotation of the disposal mechanism continually disturbs the fire, maintaining it in an even and completely broken up condition, thus assuring a proper distribution of the air supply and preventing the formation of large clinkers. For small boilers one of the company's hand-cleaned stokers is advised for economy.

Drop Forged Wrenches, Etc.

The Lakeside Forge Company of Erie, Pa., manufacturers of drop forgings of steel, iron, bronze and copper, has issued Catalogue O, which covers fully the wide range of its products in the line of drop forged wrenches of all kinds. These include, among many others, structural and construction wrenches, the former with straight opening and the handle offset and the latter with opening of a 15 degree angle and straight handle. The tangs are tapered and formed so that they may be used for bringing bolt holes into line and also for placing in convenient openings when the wrench is not in use, this preventing loss and keeping the tool in sight. A special set of wrenches for automobiles, known as the "Erie Kit" is also a feature. In a test of the Lakeside wrenches at the plant of one of the largest manufacturing companies a number of bolts were broken by screwing up the nuts with the wrenches, but without breaking the tools. The company is also producing shouldered eye bolts, a new product of its plant and a small folder descriptive of them is sent with the catalogue. The Lakeside products are handled by the leading jobbers and dealers all through the South and Southwest.

Book Reviews.

The Pasteurization of Milk From the Practical Viewpoint. By Chas. H. Kilbourne, late chief of the division of pasteurizing plants, New York City Department of Health. Published by John Wiley & Sons, Inc., New York. London: Chapman & Hall, Ltd. Cloth-bound, 248 pages. Price \$1.25.

The author of this practical and excellent little book says in its beginning that he has endeavored to handle his subject so that milk dealers, students in dairy schools and also health department officers charged with supervision and control of milk sold in their respective communities will find in it practical assistance for their work. He felt that there was a real need for such a work, for, excepting the bulletins issued by the United States Government, there are but few books dealing with the practical aspects of milk pasteurization. Admitting the possibility that his long connection with milk work as carried on by the New York City Health Department has somewhat colored his views with official conservatism, he says that he has endeavored to be fair and impartial and to consider matters from the dealers' point of view, and he hopes that those who honestly desire to handle milk so that it will be safe and salable will discover assistance in its pages, but if there are any dealers whose motives are questionable and who look into it for suggestions as to how they may save milk or cream that is going bad they will be disappointed. The book discusses the entire subject of pasteurization, considers, describes and illustrates the various kinds of mechanical appliances necessary in the work, and, in fact, makes a complete and enlightening exposition of the subject.

Capital and Surplus
\$4,000,000



Total Resources
\$38,000,000

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FINANCIAL NEWS

The MANUFACTURERS RECORD invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

FINANCIAL CORPORATIONS

Ga., Dublin.—Bank of Dublin has begun business; capital \$25,000. F. C. Tindol, Pres.; H. V. Westbrook and L. F. Watson, V-Ps.; and B. M. Lewis, Cash.

Ga., Statesboro.—The Sea Island Bank has purchased the banking business of W. S. Preetorius & Co.

Ga., Summit.—The Bank of Summit has consolidated with the Peoples Bank. S. J. Flaxners will be Cash. of the consolidated banks.

N. C., Kinston.—Caswell Banking & Trust Co., authorized capital \$50,000 has applied for charter. Incpts.: W. D. LaRoque, Pres.; C. R. Dodson, V-P.; T. W. Heath, Cash.; F. C. Dunn, E. V. Webb, F. K. Sutton, W. D. Hood, W. B. Douglas, H. C. Hiner and others. Business is to begin about Feb. 1.

Okla., Durant.—State National Bank has purchased controlling interest in the First National Bank of Durant. E. C. McMillion, McAlester, is Pres. of the State National and George H. Harris, Durant, Cash.

S. C., Easley.—Commercial Bank, capital \$50,000, has begun business. W. M. Hagood, Pres.; H. C. Hagood, V-P. and Cash., and C. M. Folger, Asst. Cash.

S. C., Fairfax.—First National Bank is chartered, capital \$25,000. This is a conversion of the Bank of Fairfax.

Tex., Dallas.—The First State Bank of Dallas, it is reported, will absorb the Central State Bank & Trust Co., also of Dallas.

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Tex., Eldorado.—Benton Abstract & Title Co., capital \$6500 will begin business Jan. 10. Incpts.: W. C. Benton, H. Meador, C. A. Spencer and A. F. Luedicke.

Va., Staunton.—Virginia Bond & Share Co., incptd., capital \$5000. E. J. Wiley, Pres.; John Crosby, Secy. and Treas.

W. Va., Charleston.—Farmers & Miners Bank is being organized and business is expected to begin the last of January.

W. Va., Dunbar.—Bank of Dunbar, capital \$25,000 is organized with H. A. Lightner, 1551 Lee St., Cash.

W. Va., Logan.—Citizens' Savings & Loan Co., capital \$125,000, is chartered. Incpts.: Harry S. Gay, Jr., J. Cary Alderson, L. E. Steele, Ford McDonald and Naaman Jackson.

NEW SECURITIES

Ark., Fort Smith.—(Paving).—Paving Dist. No. 12 contemplates issuing \$10,000 of bonds. Geo. Carnall is Secy. Board of Commrs.

Fla., De Land.—(School).—\$8000 of bonds Special Tax School Dist. No. 32, Holly Hill, are voted. C. R. M. Sheppard is Secy. Bd. of Public Instruction.

Fla., MacClenny.—(Road).—\$75,000 Baker County bonds are voted. Address County Commrs.

Fla., Ormond.—(Street).—\$35,000 of 6 per cent. 30-year \$1000 denomination bonds, dated July 1, 1916 and maturing July 1, 1946 have been purchased at 108.51 and interest by the Merchants Bank, Daytona, Fla.

Fla., St. Petersburg.—(Public Improvements).—Election is to be held Feb. 16 to vote on \$180,000 of 5 per cent. bonds for waterfront improvement and providing a sewage-disposal system. G. B. Shepard is Director of Finance.

Fla., St. Petersburg.—(School).—Election is to be held Jan. 29 to vote on \$175,000 high-school bonds. St. Petersburg School Dist. Address Board of Trustees.

Fla., West Palm Beach.—(School).—\$25,000 of 6 per cent. \$500 denomination bonds Special Tax School Dist. No. 1, Palm Beach County have been purchased at \$2907 and accrued interest by R. M. Grant & Co., Chicago and \$8000 of Dist. No. 9 were purchased at \$376.50 premium and accrued interest by F. L. Fuller Co., Cleveland.

Fla., West Palm Beach.—(Road, Bridge).—\$80,000 of bonds Special road and bridge Dist. No. 4, Palm Beach County, have been purchased by the New First National Bank of Columbus, O.

Ga., Ellaville.—(School).—\$12,000 of 6 per cent. 30-year \$1000 denomination Ellaville School Dist. bonds are voted and will be sold as soon as validated. Address Roger Williams, Clerk.

Ga., Swainsboro.—(Water, Sewer).—Election ordered for Jan. 10 to vote on \$50,000 of bonds is illegal and is called off temporarily. W. H. Proctor is Mayor and Geo. P. Edenfield, Clk. of Council.

Ky., Irvine.—(Street).—Bids will be received until Jan. 15 by H. E. Hay, City Atty., for \$12,000 of 5 per cent. 20-year bonds.

Ky., Jackson.—(Road).—\$100,000 of 5 per cent. 11-30-year Breathitt County bonds have been purchased at par by Terry, Briggs & Co., Toledo.

Ky., Ludlow.—(Viaduct).—Bids will be received by W. E. Cullen, City Clerk, until 5 P. M., Jan. 18 for \$15,000 of 4½ per cent. 20-year Elm St. viaduct bonds; dated Feb. 1, 1917.

La., Donaldsonville.—(Levee).—Bids will be received until 11 A. M. Jan. 11 for \$250,000 of 5 per cent. bonds Lafourche Basin Levee Dist. John F. Truxillo is Asst. Secy. Board of Commrs. (Recently noted under Gretna.)

La., Monroe.—(Jail, Courthouse).—Ouachita County has under consideration proposition to vote bonds for the construction of a new courthouse and jail. It will be March or April before question will be decided. W. A. O'Kelly is Clk. Police Jury.

La., Shreveport.—(Refunding).—Bids will be received until Jan. 5 by the City Clerk for \$500,000 of 4½ per cent. 1-40-year bonds.

Miss., Brandon.—(Road).—\$50,000 of Rankin County bonds have been purchased at \$600 premium by the Rankin County Bank, Brandon.

Miss., New Augusta.—(Road).—\$200,000 of 5 per cent. \$1000 denomination bonds Perry County have been purchased by C. W. McNear & Co., Chicago.

Mo., Center.—(School).—\$13,500 of Center School Dist., Ralls County, bonds have been sold. Address Board of Trustees.

Mo., Sikeston.—(Street, Sewer).—\$10,000

street and \$5000 sewer 5 per cent. bonds have been purchased at \$725 premium by Alden H. Little & Co., St. Louis.

Mo., St. Louis—(School).—\$1,000,000 of an authorized issue of \$3,000,000 of 4 per cent. 20-year bonds have been purchased at \$30,700 premium by the Mercantile Trust Co., St. Louis.

N. C., Asheville—(School).—\$35,000 of 5 per cent. 20-year bonds Black Mountain School Dist., Buncombe County, have been purchased at \$890 premium by C. N. Malone, Asheville.

N. C., Asheville—(Road, Bridge).—\$300,000 of 5 per cent. Buncombe County bonds have been purchased at \$1200 premium by Well, Roth & Co., New York.

N. C., Raleigh—(School).—Election is to be held to vote on \$15,000 of bonds for Fuquay Springs and Cardenas Consolidated School Dist., Wake County. Address County Commissioners.

N. C., Scotland Neck—(Water, Sewer).—\$80,000 of 5 per cent. water-works and sewerage bonds have been purchased at \$2632 premium by F. C. Hechler, Mgr., Security Savings & Trust Co., Toledo, O.

N. C., Statesville—(Drainage).—Bd. of Commrs. of Little Rocky Creek Drainage Dist., Iredell County, gives notice that it proposes to issue \$16,000 of 6 per cent. bonds. T. A. Summers is Chrmn. and W. W. Holland, Secy. Board of Commrs.

N. C., Wilson—(Street).—Special dispatch to the Manufacturers Record says \$250,000 of 5 per cent. \$1000 denomination bonds have been purchased at \$256,768 by Robert Garrett & Sons and Mercantile Trust Co., Baltimore.

Okla., Buffalo—(Water, Light, Sewer).—\$15,000 water-works, \$15,000 electric-light and \$25,000 sewer-system 6 per cent. 25-year bonds have been sold. Address The Mayor.

Okla., Carnegie—(Sewer).—Election is to be called to vote on \$25,000 bonds. Address Board of Town Trustees.

Okla., Checotah—(Water).—Election is called to vote on waterworks bonds. A. O. Johnson is Mayor.

Okla., Kendall, P. O., Tulsa—(Water, Sewer, Park, Fire Station).—\$45,000 of water-works, \$50,000 sewer, \$15,000 park and \$15,000 fire station bonds are voted. C. W. Johnson is Prest. Board of Town Trustees, and Geo. H. Coe, Town Clk.

Okla., Gate—(Water).—City contemplates issuing water-works bonds. Address The Mayor.

Okla., New Wilson—(Sewer, Water, Light).—Election is to be held Jan. 5 to vote on \$30,000 sewer and \$10,000 water and light bonds. Address The Mayor.

Okla., Okmulgee—(Water, Hospital).—\$25,000 water and \$30,000 hospital bonds have been purchased by the Sinking Fund Commrs.

Okla., Oklahoma City—(Road).—Commrs. Oklahoma County are reported considering question of calling an election to vote on \$1,000,000 bonds.

Okla., Tahlequah—(Water).—\$30,000 of 5 per cent. 25-year bonds have been purchased by G. I. Gilbert, Oklahoma City.

Okla., Temple—(Water).—Bonds for water-works will probably be issued. Address The Mayor.

Okla., Wetumka—(Road, Bridge).—\$33,000 of bonds have been awarded at \$1727 premium to G. A. Gilbert, Oklahoma City.

S. C., Smoaks—(Water-works).—\$3000 of bonds have been purchased at par by G. B. Sawyer & Co., Columbia.

Tex., Austin—Bonds approved by Atty.-Genl.: \$300 of 5 per cent. 20-year bonds Hamilton County Common School Dist. No. 55; \$50,000 Wood County Road Dist. No. 5; \$48,000 Dallas County Levee Dist. No. 1; \$13,000 of 6 per cent. Colorado County Drainage Dist. No. 2.

Tex., Brownwood—(School, City Hall, Fire Station).—\$80,000 of school and \$30,000 of city hall and fire station bonds to be voted on Jan. 20 are 40-year 5 per cents. H. C. McGown is Mayor.

Tex., Conroe—(Road).—\$25,000 of 5½ per cent. Montgomery County road bonds have been purchased at 102.05 by Hagan, Walker & Co., Houston.

Tex., Corsicana—(Road).—\$150,000 of bonds Road Dist. No. 9, Navarre County have been purchased at \$2475 premium, par and accrued interest by the International Trust Co. and Bosworth, Chanute & Co., both of Denver.

Tex., Cuero—(Jail).—Bids will be received until 2 P. M. Jan. 9 by Commrs. Court of DeWitt County for \$32,000 of 5 per cent. 10-20-year \$500 denomination bonds, dated Dec. 11, 1916. R. J. Waldeck is County Judge.

Tex., El Paso—(Septic Tank, Drainage, Sewer, Street).—\$255,000 of bonds have been voted, as follows: Septic tank, \$100,000; drainage, \$75,000; sewer, \$40,000; street, \$40,000. Address The Mayor.

Tex., Hallettsville—(Warrants).—\$5000 of 6 per cent. warrants, dated Nov. 15, 1916, have been purchased by J. L. Arlitt, Austin, Tex.

Tex., Port Arthur—(Water, Sewer).—\$100,000 sewer and \$80,000 of water 5 per cent. 40-year \$500 denomination bonds have been purchased at \$189,206 and accrued interest by the Security Savings Bank & Trust Co., Toledo.

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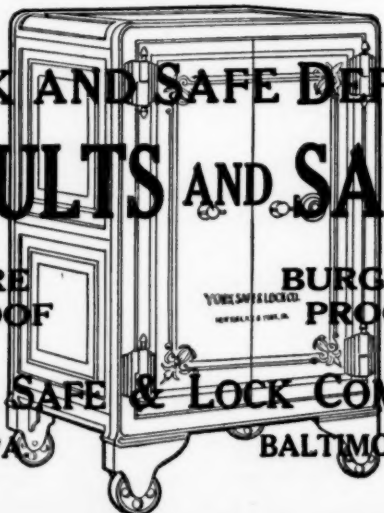
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Tex., Quitman—(Road).—On Jan. 8 the Comms. Court of Wood County will offer for sale \$150,000 of 5 per cent. bonds Road Dist. No. 6, Wood County, maturing 40 years from date, with option of redeeming \$3750 of same on Jan. 1 of each year; denominations \$1000 and \$750. R. E. Bozeman is County Judge.

Tex., Refugio—(Courthouse).—Bids will be received until Jan. 15 for \$75,000 of 5 per cent. 5-40-year \$1000 denomination Refugio County bonds. Eugene Low is County Judge.

Tex., San Benito—(Irrigation).—\$600,000 of 6 per cent. 40-year bonds of Cameron County Irrigation Dist. No. 2 are voted. Address Board of Comms.

Tex., Victoria—(School).—Election is to be held Jan. 15 to vote on \$85,000 of bonds Victoria School Dist. Address Board of Trustees.

Tex., Tyler—(School).—Date for receiving bids for \$85,000 of 5 per cent. 1-40-year \$1000 denomination bonds is postponed indefinitely. F. H. Merrill, Jr., is Pres. School Board.

Tex., Wellington—(Road).—\$100,000 of 5 per cent. 20-40-year Collingsworth County bonds have been purchased by J. E. Jarratt & Co., San Antonio.

Tex., Weimer—(Water).—Election is to be held Jan. 23 to vote on \$15,000 of 5-20-year bonds. O. A. Rose is Mayor.

Tex., Wheeler—(Road).—Bids will be received until 10 A. M. Jan. 8 by H. W. Wiley, Clk. Wheeler County, for \$50,000 of 5 per cent. 10-40-year bonds.

Va., Richmond—(School).—Resolution is to be introduced in the City Council providing for the issuing of \$1,000,000 of bonds. Address City School Board.

W. Va., Parsons—(Road).—Special dispatch to the Manufacturers Record says that \$100,000 Fairfax Dist. and \$90,000 Dry Fork Dist. 5 per cent. Tucker County bonds are voted. H. F. Colebank is County Clerk.

Va., Covington—(Road).—\$100,000 of 5 per cent. bonds have been purchased by Baker, Watts & Co., Baltimore.

FINANCIAL NOTES

P. H. Goodwin & Co., Bankers, Baltimore, announce that Adam P. Barrett withdrew from the firm Dec. 31 and that J. F. Christopher and Chas. B. Gillet became members of it on Jan. 1. Mr. Barrett has organized the firm of A. P. Barrett & Co. to deal in investment securities.

ANNUAL REPORT OF THE CONDITION OF THE

Central Savings Bank of Baltimore

S. E. Corner Charles and Lexington Streets

in the State of Maryland at the close of business December 30, 1916, in conformity with Section 36 of the Banking Law.

Funds on hand December 31, 1915.....	\$10,055,083.12
Received from depositors during 1916.....	2,753,106.50
Received interest and dividends on stocks, bonds, loans, etc., during 1916.....	457,483.56
Total,	\$13,265,673.18

Paid depositors during 1916, including interest.....	\$2,957,299.97
Paid expenses during 1916.....	40,137.73
Paid improvements during 1916.....	2,187.71
Paid taxes during 1916.....	28,903.58
Paid premiums during 1916.....	12,369.80
Ledger cost of bonds reduced during 1916.....	2,875.00
Funds on hand December 30th, 1916.....	10,221,899.39
Total,	\$13,265,673.18

ASSETS (Book Value)

Bonds and stocks owned.....	\$6,883,043.75
Loans on mortgages.....	2,189,900.00
Loans on collateral.....	380,167.47
Real estate (Bank Building).....	200,000.00
Other real estate owned.....	34,212.47
Perpetual insurance deposits.....	1,050.00
Cash on hand and in banks.....	533,525.70
Total,	\$10,221,899.39

LIABILITIES

Due depositors, including 3½% interest and extra dividend ½ of 1% credited December 30th, 1916.....	\$9,175,060.88
Guarantee fund.....	1,046,838.51
Total,	\$10,221,899.39

Accounts open December 31st, 1915.....	20,618
Accounts opened during 1916.....	1,914
Accounts closed during 1916.....	1,807
Accounts open December 30th, 1916.....	20,725

WILTON SNOWDEN, President.
J. WILSON COLE, Treasurer.

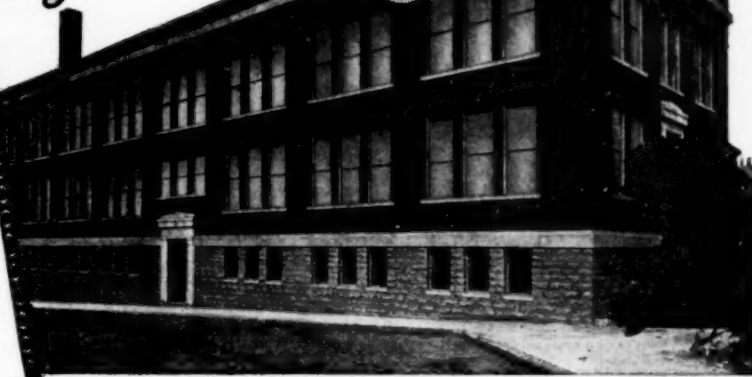
Baltimore, Md., January 1st, 1917.

We find upon examination that the investments of the Central Savings Bank of Baltimore have been carefully made in bonds of the most substantial character, that its loans are well secured, and that it is economically and judiciously managed.

S. STERETT McKIM,
WILLIAM G. BAKER, JR.,
J. PEMBROKE THOM.

Barrett Specification Roofs

This is the Bond
that guarantees your
roof for 20 years



Office Building of Nashville, Chattanooga & St. Louis Railroad, Nashville, Tenn.
The owners are protected by the Barrett 20-year Guaranty Bond.

Why We Can Afford to Give a 20-Year Guaranty

MANY people have asked: "How can you afford to give a 20-Year Guaranty on thousands of roofs all over the country laid by hundreds of different local roofers?"

Well, the answer is simple.

First, We know the materials are right because we manufacture them.

Second, The Barrett Specification, while it may seem complex to a layman, is straightforward, plain-sailing to experienced roofers.

Third, Under the guarantee plan the roof must be constructed under our supervision and receive our O. K. both as to materials and workmanship.

We further know from 50 years' experience that a Barrett Specification Roof, properly laid, will last a good deal longer than twenty years *without maintenance or repairs*.

A Barrett Specification Roof is constructed of five plies of Specification Felt, with a liberal quantity of Specification Pitch (the

greatest waterproofing material known) between each layer.

No other type of roofing approaches a Barrett Specification Roof in the amount of protective waterproofing material used in its construction.

The weight of this waterproofing is not less than 235 lbs. to 100 sq. ft. compared with 75 to 125 lbs., at most, in other types of roofs.

And on top of all this waterproofing material is laid a wearing surface of gravel, slag, tile or vitrified brick.

That's why it lasts. That is why we can safely guarantee it for 20 years.

The 20-Year Guaranty is now given on all Barrett Specification Roofs of 50 squares and over in all towns in the United States and Canada with a population of 25,000 and over, and in smaller places where our *Inspection Service* is available. Our only requirements are that The Barrett Specification dated May 1, 1916, shall be strictly followed and that the roofing contractor shall be approved by us.

We believe the broadness of the proposition is without parallel, not only in roofing, but in the whole building industry.

A copy of The Barrett 20-Year Specification, with roofing diagrams, sent free on request.

The Barrett Company

Largest Manufacturers in the World of Roofing and Roofing Materials

New York Chicago Philadelphia Boston St. Louis Cleveland Cincinnati Pittsburgh Detroit
Birmingham Kansas City Minneapolis Nashville Salt Lake City Seattle Peoria

THE PATERNON MFG. CO., Limited: Montreal Toronto Winnipeg Vancouver St. John, N. B. Halifax, N. S. Sydney, N. S.



1867

Fifty Years of Experience

1917

The First Safe Deposit Company

The First Corporate Fiduciary in Maryland

The Safe Deposit & Trust Company of Baltimore

The Fiftieth Anniversary of the establishment of the Company suggests to its Management the opportunity to publish a few facts as to its beginning, growth, and present efficiency, which it believes will be of interest to the community.

Before 1867 there were no safe deposit companies in Baltimore. Persons owning securities and valuables kept them either in their homes or offices, or more frequently, in case of securities, placed them in tin boxes and entrusted the boxes to the gratuitous care of the bank with which they did business to be placed by it in its vault. The Safe Deposit Company of Baltimore was incorporated in 1864 and began business in 1867. It was the first company in the city to have a fire and burglar proof vault in which it rented at small cost safe deposit boxes and provided for its customers easy access and every convenience for the examination and withdrawal of contents. Today it has the largest and best equipped public vault in the city, the largest number of safe renters, and most commodious facilities for the convenience of its renters.

Before 1876 there was no corporate fiduciary in Maryland. Administrators were selected by the court from among the relatives of the deceased and a person making a will named as his executor, and often as his trustee, one or more of his relatives, friends or business associates in whom he had confidence and whom he thought best qualified to settle and manage his estate. Some of those thus chosen found the duties imposed distasteful or burdensome and refused to accept or afterwards resigned, others lacked the requisite qualifications, others became incapacitated or died, and the records of the courts disclose that in many cases estates were much reduced or dissipated through neglect, mismanagement or dishonesty.

The Directors of the Safe Deposit Company of Baltimore, representative business men of the city, felt that there was an opportunity and a need for a corporate fiduciary. Accordingly they had the charter of their Company amended to authorize it to accept and execute trusts, act as Administrator, Executor, Trustee, Guardian, Committee and Receiver. The name of the Company was changed to Safe Deposit and Trust Company of Baltimore, and in 1876 the Company began to do a trust business. Thus it was the first corporate fiduciary in Maryland.

At first there was some hesitancy upon the part of people to entrust their affairs to a corporation, but it was not long before the advantages of the Safe Deposit and Trust Company of Baltimore as a fiduciary became apparent to thoughtful and prudent persons. By frequent per-

sonal contact with its officers its patrons realized how well it was adapted for the duties it performed, how strictly it safeguarded the interests of the trust estates and how carefully it considered the requirements of the beneficiaries. The Company has specialized its business along fiduciary lines. It has never entered the field of general banking, promoting or underwriting because its Management has felt that such activities would lessen its safety and efficiency as a fiduciary. The growth of its business as a fiduciary has been consistently maintained.

Since it began a trust business in 1876 the Company has settled more than 1800 estates. It now has in its hands in course of settlement and management more than 1600 estates of the aggregate face value of more than \$88,000,000. Of the number now in its hands more than 36% are under \$10,000, and more than 40% are over \$10,000, but under \$50,000 each. The beneficiaries of these estates are more than 2000.

The investments of each estate are kept separate from those of every other estate and also separate from the Company's own investments. In addition to the periodical verifications of all securities by the State Bank Examiner and the verifications by an official of the court of all securities of estates administered under the court's jurisdiction, the Company itself has its books examined and all securities and cash verified at least twice every year by Certified Public Accountants, who make their report to the Board of Directors.

The policy of the Company has been conservative; its methods progressive. Its officers have grown up with it and have had long and very wide experience in the successful management and settlement of estates. It has an organization especially trained and admirably equipped for this very exacting business. It has facilities entirely adequate for the prompt and accurate disposition of all matters entrusted to its care. Its relations with its patrons and beneficiaries have always been most cordial. It gladly renders to them any service in its power. That its services have been satisfactory is evidenced by the many expressions of appreciation received from its patrons and the fact that the Company has in many cases represented in matters of business successive generations of the same family. Its charges have always been reasonable.

The Company acts also as Agent for Individuals, Treasurer of Charitable Institutions, Custodian of Securities, Trustee under Corporation Mortgages, Fiscal Agent for Corporations and Individuals, Transfer Agent, Registrar and Depository under plans of Reorganization.

DIRECTORS:

H. WALTERS
WALDO NEWCOMER
DOUGLAS H. THOMAS

NORMAN JAMES
SAMUEL M. SHOEMAKER
BLANCHARD RANDALL

ELISHA H. PERKINS
ISAAC M. CATE
JOHN W. MARSHALL

J. J. NELLIGAN
ROBERT GARRETT
GEORGE C. JENKINS

OFFICERS:

H. WALTERS,Chairman of Board

J. J. NELLIGAN,President ANDREW P. SPAMER, ...2d. Vice-Pres. CLARENCE R. TUCKER, ...Asst. Treas. ARTHUR C. GIBSON,Asst. Secy.
JOHN W. MARSHALL,Vice-Pres. GEORGE B. GAMMIE,Treasurer H. H. M. LEE,Secretary JOSEPH B. KIRBY,Asst. Secy.
W. R. HUBNER,Asst. Secy. GEORGE R. TUDOR,Cashier ALBERT P. STROBEL,Real Est. Officer

ASSETS:

December 31, 1916

LIABILITIES:

Baltimore City Stocks, Bonds and Other Securities	
(Market Value \$3,575,761.25)	\$3,372,889.75
Loans secured by collateral	5,500,094.15
Loans secured by mortgages	396,359.81
Lot, building and vaults, 13 South street	200,000.00
Interest accrued	35,305.78
Cash on deposit	6,767,626.41
Due on open accounts	60,727.57
	<hr/>
	\$16,333,003.47

Capital stock—6000 shares	\$600,000.00
Surplus	2,400,000.00
Undivided profits	209,032.86
	<hr/>
Due trust estates—Principal and Income	\$3,209,032.86
Reserve for taxes	729,960.03
Amounts due on following accounts:	15,713.21
Special deposits	\$532,532.16
Uninvested sinking fund balances	70,175.87
Coupons and dividends	286,892.68
Deposits in trust (corporations)	297,526.20
Fiscal agent balances	11,191,170.46
	<hr/>
	12,378,297.37
	<hr/>
	\$16,333,003.47

In its chosen line of business the Company is pre-eminent

Annual Report of the Condition of

EUTAW SAVINGS BANK OF BALTIMORE

(S. W. Corner Eutaw and Fayette Streets)

In the State of Maryland, at the close of business December 30, 1916,
in conformity with Section 36 of the Banking Law.

Funds on hand December 31st, 1915.....	\$28,337,836.63
Received from Depositors during 1916.....	7,466,280.56
Received interest and dividends on stocks, bonds, loans, etc., during 1916.....	1,325,561.23
Total,	\$37,129,678.42

Paid Depositors during 1916, including interest.....	\$7,350,598.00
Paid expenses during 1916.....	62,646.83
Paid taxes during 1916.....	69,189.20
Reduction in cost of Banking House.....	15,000.00
Paid premiums, etc., during 1916.....	73,987.58
Paid accrued interest on securities purchased.....	25,025.96
Funds on hand December 30th, 1916.....	29,533,230.85
Total,	\$37,129,678.42

ASSETS

(Book Value)

Bonds and stocks owned (Par Value \$21,504,255.00).....	\$20,950,616.11
Loans on Mortgages.....	6,410,790.00
Real Estate (Bank Building).....	220,000.00
Ground Rents.....	32,300.00
Cash on hand and in Banks.....	1,919,524.74
Total,	\$29,533,230.85

LIABILITIES

Due Depositors.....	\$26,232,813.73
Guarantee Fund.....	2,000,000.00
Undivided Surplus (chargeable with nine months' accrued interest on deposits payable April 1, 1917).....	1,300,417.12
Total,	\$29,533,230.85

Accounts open December 31, 1915.....	44,618
Accounts opened during 1916.....	5,132
Accounts closed during 1916.....	4,982
Accounts existing December 30, 1916.....	44,768

WILLIAM M. HAYDEN, *President*
FRANK G. EVANS, *Treasurer*

Baltimore, January 1, 1917.

At the request of the Board of Directors of the EUTAW SAVINGS BANK OF BALTIMORE, the undersigned have audited the above report and found it correct; they have also counted all the securities named therein and found them on hand as stated.

WALDO NEWCOMER
(President National Exchange Bank).

WILLIAM WINCHESTER
(Chairman Board National Union Bank).

JOHN D. HOWARD
(John D. Howard & Co., Bankers.)

WILLIAM INGLE
(President Baltimore Trust Co.).

EDGAR G. MILLER, JR.
(President Title Guarantee & Trust Co.).

WILLIAM MARRIOTT
(Cashier Western National Bank).

BOARD OF DIRECTORS

WILLIAM A. MARBURG	CHARLES C. MACGILL
WILLIAM M. HAYDEN	THOMAS O'NEILL
E. AUSTIN JENKINS	EBEN B. HUNTING
GUSTAVUS OBER	EUGENE LEVERING
JOHN S. GITTINGS	JAMES L. SELLMAN
WILLIAM B. HURST	THOMAS B. GRESHAM
H. CRAWFORD BLACK	JOHN S. GIBBS, JR.
WALTER B. BROOKS	JOHN T. STONE
EDWARD L. ROBINSON	RANDOLPH BARTON, JR.
J. HOUGH COTTMAN	HENRY D. HARLAN
CHARLES E. RIEMAN	E. BARTLETT HAYWARD
CHARLES ENGLAND	JERE H. WHEELWRIGHT
F. HIGHLANDS BURNS	

ANNUAL REPORT OF THE CONDITION

— OF —

The Savings Bank OF BALTIMORE

Of Baltimore, in the State of Maryland, at the close
of business December 30, 1916, in conformity with
Section 36 of the Banking Law.

Funds on hand December 31, 1915.....	\$37,336,761.86
Received from Depositors during 1916.....	7,908,403.42
Received interest and dividends on stocks, bonds, loans, etc., during 1916.....	1,823,236.34
Total,	\$47,068,401.62

Paid Depositors during 1916, including interest..	\$7,801,657.99
Paid expenses during 1916.....	80,260.86
Paid taxes during 1916.....	102,896.00
Paid premiums during 1916.....	61,790.70
Paid for Accrued Interest during 1916.....	23,693.31
Ledger value of Real Estate reduced during 1916.....	17,063.88
Funds on hand December 30, 1916.....	38,981,038.88
Total,	\$47,068,401.62

ASSETS

(Book Value)

Bonds and Stocks owned.....	\$34,870,276.67
Loans on mortgages.....	2,545,658.00
Real Estate (Bank Building).....	300,000.00
Other Real Estate owned.....	57,558.71
Cash on hand and in Banks.....	1,207,545.50
Total,	\$38,981,038.88

LIABILITIES

Due Depositors.....	\$35,862,349.21
Guarantee Fund.....	2,200,000.00
Undivided Surplus (chargeable with nine months' accrued interest on deposits payable April 1, 1917).....	918,689.67
Total,	\$38,981,038.88

Accounts open December 31, 1915.....	53,482
Accounts opened during 1916.....	6,083
Accounts closed during 1916.....	5,695
Accounts existing December 30, 1916.....	53,870

WILLIAM H. CONKLING,
President.
FREDERICK A. HOFFMAN,
Treasurer.

The undersigned, appointed by the Board of Directors of THE SAVINGS BANK OF BALTIMORE to audit its Statement for the past year and to report thereon, have carefully performed the duty assigned to them and find the same to be correct.

FRANKLIN P. CATOR,
SEWELL S. WATTS,
ALBERT D. GRAHAM.

DIRECTORY

ARCHITECTS ENGINEERS CONTRACTORS

Detailed classification of specialized work undertaken by those having cards in this Directory will be found in Classified Index.

MILBURN, HEISTER & CO.
Architects

WASHINGTON, D. C.

THE ARNOLD COMPANY
*Engineers—Constructors
Electrical—Civil—Mechanical*

 105 South La Salle St. CHICAGO
111 Broadway NEW YORK

 J. M. CLARK, Mem. A. I. M. E.
C. E. KREBS, Mem. A. I. M. E.
G. R. KREBS J. W. MORGAN

CLARK & KREBS
*Civil and Mining Engineers and Geologists
Coal, Oil and Gas
Railroad and Municipal Engineering*
CHARLESTON, W. VA.

HENRY WELLES DURHAM
Consulting Engineer

 Highway and Municipal Engineering Work.
Specialist in Street Paving.
366 Fifth Avenue NEW YORK

Government Landscape Architect—1910-1916.

GEORGE BURNAP
Landscape Architect
 Washington, D. C.

PARKS SUBDIVISIONS ESTATES

DAY & ZIMMERMANN

 Successors to
DODGE, DAY & ZIMMERMANN
Engineers
Layout, Design, Construction, Industrial Plants,
Examination, Reports and Operation, Public
Service Properties.
611 Chestnut Street PHILADELPHIA

 A. LANGSTAFF JOHNSON, Jr., M.E., E.E.
Mutual Building, RICHMOND, VA.
Southern Associate of
MOSES, POPE & MESSER, Inc.
Consulting Engineers

 366 Fifth Avenue, NEW YORK
The combined services of a corps of chemical,
civil, efficiency, electrical, industrial, mechanical
and municipal engineers, with a research
laboratory, are available to our clients.

DOW & SMITH
Chemical Engineers Consulting Paving Engineers
A. W. Dow, Ph.B. F. P. Smith, Ph.B.
Mem. Am. Inst. Ch. Engrs.
Mem. Am. Soc. Civ. Engrs.
Asphalt, Bitumens, Paving, Hydraulic Cement,
Engineering Materials
191-3 E. 23d Street NEW YORK

LOUIS G. CARLISLE
Architect

VICKSBURG, MISS.

COMSTOCK ELECTRIC CO., Inc.
Contracting Engineers

HIGH POINT, N. C.

CHARLES T. MAIN

Member A. S. M. E.

Textile Mills
WATER POWER DEVELOPMENTS

201 Devonshire Street BOSTON

GILBERT C. WHITE, C. E.

M. A. M. Soc. C. E.

Consulting Engineer

 Water Works Streets
DURHAM, N. C.

D. P. MORTON

G. G. WHITE

MORTON & WHITE
Architects and Engineers

JOHNSON CITY, TENN.

HENRY EXALL ELROD

 Mem. Am. Soc. M. E. Mem. Am. Soc. C. E.
Roads, Pavements, Municipal Works, Reports
and Appraisals.
Southwestern Life Bldg. DALLAS, TEXAS

**DANIEL W. MEAD
F. W. SCHEIDENHELM**
Consulting Engineers

 Hydraulic and Electric Developments,
Water Supply, Flood Control, and
Reclamation Works.
Equitable Bldg., 120 Broadway NEW YORK

W. E. MOORE & COMPANY
Engineers

 Reports, Designs, Supervision, Public
Service Properties, Power Developments,
Distribution and Application.

Union Bank Building PITTSBURGH, PA.

MORSE, HALL & COCKEY
Consulting Engineers

 ROBERT B. MORSE HARRY R. HALL,
M. Am. Soc. C. E. Assoc. M. Am. Soc. C. E.
VINTON D. COCKEY
Specialties—Water Supply and Sewerage,
Typhoid Fever Investigations, Landscape
Developments, Roads and Paving.
324 N. Charles St. BALTIMORE, MD.

HUGH L. COOPER & CO.
General Hydraulic Engineering

 Including the Design, Financing, Construction
and Management of Hydro-Electric
Power Plants.
101 Park Avenue NEW YORK

HENRY B. HAVELY, C. E.
Consulting Engineer

SPECIALIST IN

Highways, Streets and Pavements.

MORRISTOWN, TENN.

WILLIAM SPEED
Civil Engineer and Landscape Architect

 Chief Engineer Louisville-Nashville
Division Dixie Highway.

Starks Building LOUISVILLE, KY.

DANIEL B. LUTEN
Designing and Consulting Engineer

 Reinforced Concrete Bridges exclusively.
Associate Engineers in each State.

INDIANAPOLIS, IND.

MORRIS KNOWLES

Mem. Am. Soc. C. E. Mem. Am. Soc. M. E.

Hydraulic and Sanitary Engineer

 Investigations and Valuations for Purchase
or Financing Water and Sewer
Systems, Water Power, Drainage and
Irrigation Systems.
Oliver Building PITTSBURGH, PA.

C. L. BROOKS ENGINEERING CO.
Packing-House and Cold-Storage Engineers.

 We help you raise the capital, build the
plant and run it successfully. We make
a specialty of Southern plants.
Main Office—MOULTRIE, GA.

 MINNEAPOLIS, MINN. ATLANTA, GA.
736 Plymouth Bldg. 711 Empire Bldg.

WILLIAM C. SPIKER, C. E.

Mem. Am. Soc. Civ. Engrs.

Consulting Engineer

 Reinforced Concrete and Structural Steel
Buildings and Bridges.
1408-9 Candler Bldg. ATLANTA, GA.

BROWN & CLARKSON
Civil and Mining Engineers.

 Comprehensive Town Planning, Land Subdivision,
Traffic Problems, Road and Street Systems.
Precise Surveys, Triangulation, Topographic Property,
Geological Surveys for Oil and Mine Development.
Oxford Bldg., 14th St. and N. Y. Ave. WASHINGTON, D. C.

ELLIOTT VANDEVANTER

A. M. Am. Soc. C. E.

Contracting Engineer.

 Specialties—Sewerage, Road and Paving,
Reinforced Concrete.
1803 Guilford Ave. BALTIMORE, MD.

EDWIN WORTHAM, E. E.
Consulting Engineer

 Industrial Plants, Factories, Municipal Work
of all kinds, Steam and Electric Railways,
Public Utilities, Reports, Valuations, Supervision,
Franchises Drawn, Properties Operated.
Suite 47, Allison Bldg. RICHMOND, VA.

 W. M. GARDNER, H. N. HOWE,
Mem. Am. Soc. C. E. Assoc. Mem. A. M. Soc. C. E.

GARDNER & HOWE
Engineers

 Designs, Estimates and Supervision;
Concrete Bridges, Viaducts, Buildings,
and other Structures.
Porter Building MEMPHIS, TENN.

FREDERICK H. LEWIS
Civil and Mechanical Engineer

 Plans, Specifications and Supervision
for Industrial and Electric Plants.
732 Brown-Marx Bldg. BIRMINGHAM, ALA.

E. W. MYERS
Consulting Engineer

 Water Power Water Supply Sewerage
GREENSBORO, N. C.

WALTER G. FRANZ

Mem. A. S. M. E. Assoc. A. I. E. E.

Consulting Engineer

 Designing and Superintending of Mechanical,
Electrical and Sanitary Work.
Union Trust Bldg. CINCINNATI, OHIO

THE A. J. MARTIN CO.
Contracting Engineers

 Bridges, Dams and Power Houses. Difficult
Foundation Work.
311 Union Svc. Bldg. AUGUSTA, GA.
PORTSMOUTH, OHIO

MARTIN J. LIDE
*Consulting and Constructing Electrical
and Mechanical Engineer*

BIRMINGHAM, ALA.

KNIGHT & QUAYLE
Consulting Engineers

 Water Works, Water Supply and Purification, Flood
Prevention, Sewerage and Sewage Disposal, Municipal
Sanitation and Wastes Utilization, Garbage Collection
and Reduction, Supervision and Operation of Sanitary
Works, Pumping Engine Efficiency Tests.
Chemical, Biological and Mechanical Analyses,
Reports, Valuations, Designs.
408 Times Building CHATTANOOGA, TENN.

ISHAM RANDOLPH & CO.

CHICAGO JACKSONVILLE

Consulting Engineers

 Reports, Plans, Supervision, Drainage,
Harbor Work, Water Power, Bridges,
Municipal Work and Railways.

1310 Heard Bldg. JACKSONVILLE, FLA.

 EDWARD F. TERRY FREDERICK TENCH
President. V.-P. & Treas.

THE TERRY & TENCH CO., Inc.
Bridge Builders,

 General Contractors, Engineers and
Designers.
Grand Central Terminal NEW YORK

WILLARD, BOGGS & CO.
General Contractors

 Water Power Development Railroad Construction.
Buildings.
SPARTANBURG, S. C.

M. Am. Soc. C. E. M. Inst. C. E.

ARTHUR PEW
Consulting Engineer

Municipal Work ATLANTA, GA.

FREELAND-KLYCE ENG'G CO.
Consulting Engineers

 Concrete and Steel Structures
NASHVILLE, TENN.

F. G. PROUTT

 Electrical and Mechanical Engineer
Member A. I. E. E. Member A. S. M. E.

Randolph Bldg. MEMPHIS, TENNESSEE

HEDRICK & HEDRICK
Consulting Engineers
Bridges, Viaducts and other Structures of
Steel and Reinforced Concrete.
Interstate Building, KANSAS CITY, MO.

E. ELFORD
Contractor and Engineer

 Reinforced Concrete Construction
520 Commercial Bldg. COLUMBUS, OHIO

THE DABNEY ENGINEERING CO.

 Water Works, Sewers, Roads, Drainage, Electric
Lighting Systems, Plans, Estimates, Reports.
376 Randolph Bldg. MEMPHIS, TENN.

W. C. O'BRIANT

 General Mill Construction. Saw Mills a Specialty.
Randolph Bldg. MEMPHIS, TENN.

DIRECTORY

ARCHITECTS ENGINEERS CONTRACTORS

Detailed classification of specialized work undertaken by those
having cards in this Directory will be found in Classified Index.

Ford, Bacon & Davis, Engineers.

115 Broadway, New York

New Orleans

San Francisco

J. E. SIRRINE

Mill Architect and Engineer

SPECIALTY:

Textile Mills and Water Power Developments

GREENVILLE, S. C.

CRAM ENGINEERING CO., Inc.

Engineers

CONSTRUCT MANAGE FINANCE.

Industrial Properties and Public Utilities.
Reports Valuations Estimates.

Maryland Casualty Building

BALTIMORE, MD.



Stone & Webster Engineering Corporation

Constructing Engineers

NEW YORK

BOSTON

CHICAGO

ATLANTIC ENGINEERING COMPANY

*Engineers Constructors
Electrical—Civil—Mechanical*

Steam and Electric Railroads; Bridges; Highways; Water Powers; Power, Lighting
and Industrial Plants; Municipal Improvements; Docks and Wharves; Drainage and
Reclamation Projects; Railroad Valuation; Appraisals; Economical Power Production.
606-607 Germania Bank Building SAVANNAH, GA.

THE J-G-WHITE COMPANIES

ENGINEERS

CONTRACTORS

FINANCIERS

OPERATORS

43 EXCHANGE PL.



NEW YORK

SAWMILL CONSTRUCTION COMPANY

Contractors and Engineers.

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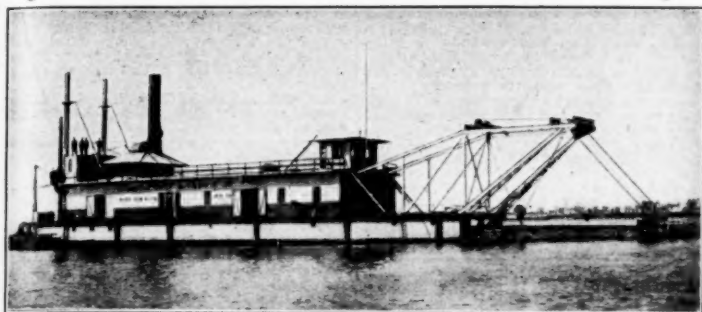
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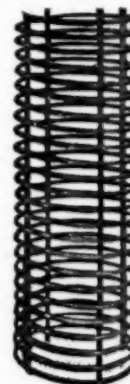
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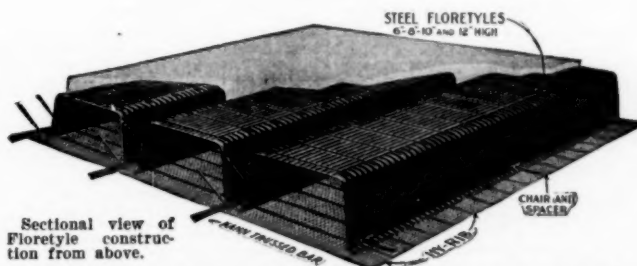
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MISSOURI FARM.—For sale or trade. Well improved. Four hundred acres. All in cultivation, half sown to wheat now. What have you? W. C. Thomas, Magnolia, Miss.

NEW ENGLAND

GO and buy NEW ENGLAND FARMS. EAST Produce milk at 3c, sell 10c. qt. YOUNG and feed ten million people. MAN. S. F. Sherman, 52 Bway., New York.

NORTH CAROLINA

FOR SALE.—66-acre farm, half mile from corporate limits, with 3000 house, ideally situated for summer boarding-house and dairy and truck farm. Bargain. Price \$10,000. Address E. W. Blythe, Brevard, N. C.

TEXAS

FOR SALE.—600½ acres rich black sub-irrigated river bottom land, suitable for winter gardening, truck farming, and good for all staple crops, including cotton, corn and alfalfa, rice and sugar cane; rich as anything on earth; will rent for more than 10 per cent. on investment. Price \$40 per acre; easy terms.

Also, 600 acres 95 per cent. A-1 farm land, all subject to irrigation; 500 acres in cultivation; good ranch improvements. Price, \$22.50 per acre; very easy terms with release clause. W. W. Miller, Cattleman's Exchange, San Antonio, Texas.

VIRGINIA

BUY A FARM IN VIRGINIA.—I offer several large farms suitable for dairy and stock farms. Demand in Richmond for milk greater than the supply. Long grazing season and rich corn lands make Virginia river plantations ideal stock and dairy farms. Investigate the conditions here before buying elsewhere. Information cheerfully given. Correspondence invited. Prompt replies.

710-acre James River farm, 15 miles from Richmond, 1 mile from railroad station. 500 acres in cultivation and grass; 300 is of the very best James River low grounds; 10-room house; barns and outbuildings. Write for description and price.

240-acre farm in Mecklenburg County; 150 acres in cultivation; very rich, productive land; near railroad station. Twelve-room dwelling and outbuildings. Can furnish large or small farms in any section of Virginia. Tell me of the kind of farm you want. W. E. Harris, 429 Mutual Bldg., Richmond, Va.

SPLENDID 400-ACRE Virginia farm; beautiful 10-room dwelling in large, shady lawn. Convenient to town, on public road. Will exchange for Chicago property. Pollard & Bagby, Inc., Richmond, Va.

Classified Opportunities

FRUIT, FARM AND TRUCK LANDS

VIRGINIA

DAIRY, CROP AND TRUCK FARMS. SUBURBAN AND COUNTRY RESIDENCES. Good roads, mild climate, good labor conditions, desirable neighbors. Write us about the kind of place, large or small, you might sometime like to live on. Slaymaker-Schneider Corp., No. 612 King St., Alexandria, Va.

MAGNIFICENT ESTATE in Piedmont Virginia, 2 hours by rail from Washington. 630 acres, 432 in cultivation and pasture, of which 140 is very rich bottom land. 188 in A No. 1 hardwood timber. Land adapted to all kinds of grains and grasses. 2 1/2 acres apple trees, bearing finely. 12-room mansion, 2 bathrooms; acetylene gas plant; running water in rooms; three grand porches. Three tenant-houses, servants' quarters, 2 horse barns, cattle barn and other outbuildings. Grist mill on farm. Price \$45,000. Terms, \$20,000 cash, balance in 1, 2 and 3 years. J. L. Marye, Newport News, Va.

500 ACRES best trucking land, 7 miles from Newport News and Hampton, Va. Water transportation; good roads; excellent dwelling; all necessary outbuildings; 10 days earlier than famous Norfolk truck gardens. One mile from army aviation plant. Act quick, as prices are advancing. \$40 an acre. Will divide tract. Other bargains all sizes. Best climate; quick transportation to Baltimore, Philadelphia, New York and the West. J. L. Marye, Newport News, Va.

2700-ACRE FARM on James River, Va.; deep-water facilities; 1700 acres fine timber; 1000 acres high state of cultivation; well equipped; new barns, etc.; splendid rich man's estate. Apply for price, Green & Redd, Richmond, Va.

ATTORNEYS

RAYMOND M. HUDSON, Washington, D. C. Attorney. Practice before U. S. Supreme Court, U. S. Court of Claims, D. C. Court of Appeals, D. C. Supreme Court, Va. and Md. Courts, Executive Departments, Congressional Committees, Federal Reserve Board, Federal Trade Commission, Interstate Commerce Commission. Co-le "Raymond."

FINANCIAL

SOUTHERN MILL STOCKS. \$100,000 high-grade 7 per cent. preferred, \$250,000 common stock in selected Southern mills for sale by

F. C. Abbott & Company, 19 years' experience in this field. 1001-1002 Commercial National Bank Bldg., Charlotte, N. C.

A SAFE INVESTMENT.

Steady and large dividends. We offer 7% preferred and guaranteed stock, which also shares in all profits of the company. This means 10% to 20% now, and much more later. We grow the Albemarle Pippin, the finest apple in the world, made famous by Queen Victoria. It requires a combination of soil and elevation, which is very limited. It cannot, therefore, be overdone. We have developed the selling end of the business and ship boxed Albemarle Pippins to satisfied customers in thirty odd States and abroad. We need capital. It will pay you to write us for particulars. Pippin Co., Charlottesville, Va.

INCORPORATING COMPANIES

CORPORATIONS ORGANIZED under the broad, liberal and substantial laws of Delaware. Minimum original and annual expense. Estimates cheerfully furnished. Write for our revised DIGEST of the law. CORPORATION COMPANY OF DELAWARE Equitable Building, Wilmington, Del.

BUSINESS OPPORTUNITIES

WANTED—A DREDGE BOAT AND QUICK-ACTION DREDGE MAN with money enough to take a drainage job out of which he can make three legitimate profits. A tract of 2500 acres of wet, alluvial prairie, almost a suburb of New Orleans, can be bought at a low price on easy terms. It can be bonded and the bonds sold for money to do the reclamation.

You can make a profit on the dredging, a profit on the land and a profit on the bonds. The land fronts a town, a railroad, a gravel road and a navigable stream to New Orleans. If you need any further particulars, write O. W. Crawford, 430 Audubon Building, New Orleans, Louisiana.

START A BUSINESS of your own in "Artisto" concrete marble and granite. See our exhibit at Chicago and Kansas City cement shows. Write Art Stone Co., Waynesboro, Pa. Box 300.

FOR SALE—Complete new crushing and pulverizing plant with 50 acres limestone on trunk-line railway. Splendid opportunity for agricultural lime business. Box 908, Carversville, Ga.

BUSINESS OPPORTUNITIES

FORTY-ROOM HOTEL on main business thoroughfare of Newport News. Steadily filled for past 2 years. Room to enlarge. Convenient to postoffice, shipyard, amusements and all business houses. \$60,000,000 of work in shipyard. Port doing capacity business. This is a rare chance for a hotel man or for investment. J. L. Marye, Newport News, Va.

WE WANT to get in touch with responsible real estate, insurance, bankers, brokers, financial and investment agents who will aid us in handling our clients quickly and intelligently in your section. Write us your facilities for handling business. Help us in perfecting our service system and you help yourself. Roger A. Jennings & Co., Financial and Investment Agents, Greensboro, N. C.

WANTED—To bid on road contracts. We are equipped with road-building machinery, 2 Knox tractors, 6 yards capacity; car loader, etc. Would take contract for Knox tractors separate if job is large enough, or would go in with some good live contractor. Anderson County Construction Co., Lawrenceburg, Ky.

DOES YOUR CITY need a board of trade or chamber of commerce or revival of the existing organization? If so, write us. We organize and conduct campaigns for members and contributions for all civic improvements. National Civic Service Co., Peters Bldg., Atlanta, Ga.

PARTNER WANTED in a wholesale shipping business. A good proposition to the right party in the best town in Florida. Address P. O. Box 186, Fort Myers, Florida.

WILL PURCHASE desirable electric-light or gas property having established earnings, or finance consolidation of a group of such properties. Advise concerning present annual gross earnings and franchise conditions. Treasurer, P. O. Box 1136, Providence, R. I.

FLORIDA HOTEL FOR SALE.—Hotel, 200 rooms; inn, 19 rooms; 4 cottages, 12 rooms each. All furnished. Motor and row boats; 280 acres fertile soil and standing timber; spring of unusual excellence and purity; also suitable for manufacturing purposes. No reasonable offer refused. O. D. Seavey, Marshfield, Mass.

MISCELLANEOUS

OLD FABER PLACE—On beautiful Ashley River, near Charleston, S. C. Enticing grounds and gardens. Visitors should not miss a drive there. A. C. Kaufman, owner.

BUILDINGS—STEEL PORTABLE

"PRUDENTIAL" STEEL BUILDINGS for all purposes; portable, one-story construction; workshops, toolhouses, storage, garages, bunkhouses, etc. Write for Catalog A. C. D. Pruden Company, Baltimore, Md.

COLLEGES AND SCHOOLS

EXECUTIVES ARE IN DEMAND IN MODERN BUSINESS.—Many of the largest business organizations in the U. S. have adopted Pace Standardized Courses to meet their growing need for competent executives. To the ambitious man who is looking for advancement in modern business the opportunity presented by this nation-wide educational movement is unparalleled. You can take advantage of the same courses by direct enrollment. Instruction by mail—no interference with present employment. Free Bulletin (32 pp.) gives complete information. Ask for Bulletin M-5. Pace & Pace, Hudson Terminal, 30 Church St., New York.

PATENT ATTORNEYS

EUGENE C. BROWN, ENGINEER AND PATENT LAWYER, 734 Eighth St. N. W., Washington, D. C. Graduate Engineer Lehigh University; Member Bar U. S. Supreme Court; Former Examiner U. S. Patent Office. PATENTS AND TRADEMARKS. Inventions considered from engineering and legal standpoints. Infringements and extent of patent monopoly investigated for manufacturers. Glad to answer any inquiries.

HIGH-VALUE PATENTS. Patents that fully protect. Patents that Pay Largest Financial Returns are the kind we obtain. References: SUCCESSFUL Inventors and WELL-KNOWN Manufacturers. Send 8 cents for new book of extraordinary interest and value to inventors. R. S. & A. B. Lacey, 53 Barrister Building, Washington, D. C. Established 1893.

PATENT YOUR IDEAS—\$9000 offered for certain inventions; book, "How to Obtain a Patent," and "What to Invent," sent free upon request; send rough sketch for free report as to patentability. We advertise your patent for sale at our expense. Chandler & Chandler, Patent Attorneys, 978 F St., Washington, D. C.

PATENT ATTORNEYS

PATENTS.—Write for how to obtain a patent, list of patent buyers, and inventions wanted. \$1,000,000 in prizes offered for inventions. Send sketch for free opinion as to patentability. Our four books sent free upon request. Patents advertised free. We assist investors to sell their inventions. Victor J. Evans Co., Patent Attorneys, 712 Ninth St., Washington, D. C.

PATENTS THAT PROTECT AND PAY. Advice and books free. Highest references. Best results. Promptness assured. Trade marks registered. Watson E. Coleman, Patent Lawyer, 624 F St., Washington, D. C.

NORMAN T. WHITAKER, Attorney-at-Law and Mechanical Engineer. Former Assistant Examiner of Patents and Trade-Marks, U. S. Patent Office. 22 Legal Building (opposite Patent Office), Washington, D. C.

INDUSTRIES WANTED

MISCELLANEOUS

SISTERSVILLE, W. VA., on the B. & O. R. R. and Ohio River, situated in the steel district of the United States, offers to all manufacturers: Electric power at 1/2c. per K. W. H. free factory sites up to thirty acres. Sc. natural gas, \$1.25 coal, and other equally cheap natural resources. It is the richest city in the United States per capita and one of the best governed. But this is not all. It possesses men whose co-operation is offered financially and otherwise—the type you will want to associate with as a business executive. Write Secretary Chamber of Commerce.

BALTIMORE FACTORY AND TERMINAL SITES.—Statement of Asa G. Candler, President The Coca-Cola Co.: "Investigation convinced us that Baltimore is not only the commercial metropolis for Southern trade, but that it affords shipping opportunities both by water and rail for domestic and foreign traffic superior to any of the great cities in any section of the United States." Locate in Baltimore and derive these advantages. We can provide accommodations to meet your requirements.

"OUR MOTTO": FACTORY AND TERMINAL SITES IN BALTIMORE. Wm. Marten & Co., Ninth Floor, Lexington St. Bldg., Balto., Md.

FACTORY SITES

LARGE OR SMALL MANUFACTURING SITES at Richmond, Va. Water and rail transportation give low freight rates to all parts of the country. Good labor conditions; near raw materials; mild climate. 350 acres fronting James River for 3000 ft. above high water; channel 23 ft. deep. Two miles of railroad will connect property with 6 trunk-line railroads. Will sell all or part of tract to manufacturer. For full particulars address W. E. Harris, 420 Mutual Bldg., Richmond, Va.

MANUFACTURERS' BUILDING FOR SALE.—A well-constructed frame and steel building, 100x150 feet, with addition 45x75 feet, railroad siding, located in Parkersburg's manufacturing district. Exceptionally good labor and fine conditions. Plenty of ground for expansion. Will assist in financing business for reputable manufacturer who wants to locate here. Write me about manufacturing sites. O. S. Hawkins, Parkersburg, W. Va.

AUCTIONEER

LANDOWNERS, executors, administrators, have you land for sale? We have a trained organization specializing in subdividing and selling land at auction. We get results. Write for details and references. Standard Realty Co., 508 Peters Bldg., Atlanta, Ga.

MEN WANTED

WANTED EXPERIENCED BUILDING-MATERIAL MAN. A large middle West corporation desires to secure the service of a high-class, experienced building-material man to take charge of its material yards in the capacity of purchasing agent and manager.

The man for this position, besides actual knowledge of building materials and market conditions, should also possess knowledge regarding traffic rates and conditions, and he should be at least 35 years of age.

Besides experience and knowledge of the building-material field, the applicant must expect to demonstrate good character by references, etc.

When writing enclose letters of recommendation, and give complete but brief statement of your past experience, connections, salary wanted, etc. All such correspondence will be treated in strictest confidence.

Replies to this advertisement should be rushed with all possible dispatch, since we wish to secure our man immediately. Address No. 3093, care Manufacturers Record.

WANTED—A No. 1 contract man and purchasing agent for auction lot sale company. Give experience and references. Good connection to right man. Address Box 325, Huntington, W. Va.

MEN WANTED

ASST. PLANT MANAGER AND SUPT. Wanted—A man by a well-organized plant who can efficiently handle the manufacturing and office details of a concern employing over 200 men in the manufacture of automatic sprinkler equipment and kindred devices by a growing company located in a progressive city of over 100,000 in Northern Ohio. No foundry in connection, as all castings are purchased from outside. If you are such a man and are interested, write, giving complete details as to age, education, lines of experience and salary required. All correspondence will be kept in strict confidence. Address No. 3900, care Manufacturers Record.

IF ACTUALLY QUALIFIED for executive, manufacturing, technical or administrative position carrying salary between \$2500 and \$15,000, communicate with undersigned counsel, who will negotiate strictly confidential preliminaries for such positions. Not an employment agency; undersigned acts in direct confidential capacity. Send name and address only for prefatory details. R. W. Bixby, E. 1 Niagara Square, Buffalo, N. Y.

WANTED—The services of a first-class mill man with manufacturing experience to take charge of mill which will be in operation within the next 15 or 20 days. Applicant must come well recommended and have from three to four thousand dollars to take financial interest in plant. None other need apply. Address No. 3005, care Manufacturers Record, Balto., Md.

WANTED—Young man thoroughly experienced in the mill supplies and machinery line, capable of taking charge of this department. Also, young man as traveling salesman in same line of business. Chas. Leonard Hardware Co., Petersburg, Va.

SITUATIONS WANTED

ENERGETIC, capable, honest young man, 38 years of age, married, would like to obtain either a position with a real estate firm or to represent individuals or firms with capital who desire to speculate or invest in mineral, timber or farm lands or city properties, either on a straight salary or mixed salary and commission basis. Twenty years' experience as owner, agent and corporation officer in Louisiana real estate. Experienced and familiar with land laws, court decrees, assessing, tax titles, drafting of charters and deeds, title abstracting, etc., in Louisiana. With short practice could do likewise in other States. Can keep office land records, typewrite, attend to correspondence, etc. Can assist surveyors in the field. Am a good map draftsman and designer of subdivisions. Have no bad habits. Have traveled through practically every State in this country, as well as visited Europe. With short investigation can determine and figure valuations. Have given bonds from \$5000 to \$154,500. Can furnish good references. At present employed as Secy.-Treas.-Manager of land corporation. Said company nearly sold out and soon to dissolve. Address H. A. W. H., care of Orient Co., Ltd., 423 Carondelet Street, New Orleans, Louisiana.

SUPERINTENDENT of construction open for position with some good contracting firm. Several years' experience in all classes of concrete, steam shovel and team work. Can furnish references from well-known engineers and contractors. Age 28. Address No. 3002, care Manufacturers Record, Balto., Md.

YOUNG MAN wants position; office manager or similar. Experienced in contracting, financial office and some sales. Correspondent, bookkeeper or office work. Address No. 3097, care Manufacturers Record.

GRADUATE CHEMIST desires to change position. Address No. 3006, care Manufacturers Record, Balto., Md., stating salary offered and chance of advancement; 4 years' experience; in charge laboratory 3 years.

SUPERINTENDENT or works manager, American, 45; 15 years manager of large plants, handling heavy tonnage and skilled labor. Experience includes steam and electric industrial railways, steam shovels, conveyors, hydraulics, manufacturing, rail and water shipping, etc. High-grade credentials. Address No. 2097, care Manufacturers Record.

AGENCIES WANTED

MANUFACTURERS, NOTICE!

Are you represented in Florida? If not, write me. Will represent you in city or State, introducing your goods, acting as your salesman, securing agents, or making collections. Bond given. Prompt attention to ALL business, large or small. References exchanged. A. S. Russell, Manufacturers' Agent, 55 Mutual Life Bldg., Jacksonville, Fla.

LET ME represent you in New England territory. Am wide awake. Have a large acquaintance. Best of reference. General business experience. Address No. 3093, care Manufacturers Record, Balto., Md.

MACHINERY AND SUPPLIES

BLOWERS AND PUMPS

BLOWERS AND PUMPS for foundry, forge, mill, mine and factory. Pulleys, shafting, etc. Foundry equipment, engines, machinery, etc. Vacuum cleaners. We buy and sell. The Clinton-Scott Co., Cincinnati, O.

PROPOSALS

BOND ISSUES

BUILDINGS

PAVING

GOOD ROADS

More Southern Proposal Advertising Is Printed In The Manufacturers Record Than In Any Other Paper

Bids close January 16, 1917.

PROPOSALS FOR DOOR AND WINDOW
Hardware, Slate Blackboards, Electric Cable, Wire, Transformers, Panel Boards, Ammeters, Voltmeters, Electric Fixtures, Electrical Attachments, Fire-Alarm Boxes, Gasoline Torches, Pliers, Drill Points, Lamp Carbons, Insulating Paper, Pot-Head Compound, Burnishing Paste, and Lacquer. Sealed proposals will be received at the office of the General Purchasing Officer, The Panama Canal, Washington, D. C., until 10.30 A. M. January 16, 1917, at which time they will be opened in public, for furnishing the above-mentioned articles. Blanks and general information relating to this Circular (No. 1111) may be obtained from this office or the offices of the Assistant Purchasing Agents, 24 State Street, New York City; 614 Whitney-Central Building, New Orleans, La., and Fort Mason, San Francisco, Cal.; also from the U. S. Engineer Offices in the following cities: Seattle, Wash.; Los Angeles, Cal.; Baltimore, Md.; Philadelphia, Pa.; Pittsburgh, Pa.; Boston, Mass.; Buffalo, N. Y.; Cleveland, Ohio; Cincinnati, Ohio; Chicago, Ill.; St. Louis, Mo.; Detroit, Mich.; Milwaukee, Wis.; St. Paul, Minn.; Chattanooga, Tenn.; Louisville, Ky.; Mobile, Ala., and Galveston, Tex.; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill., and Commercial Club, Tacoma, Wash. EARL I. BROWN, Major, Corps of Engineers, U. S. A., General Purchasing Officer.

Bids close February 16, 1917.

TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., December 29, 1916. Sealed proposals will be opened in this office at 3 P. M. February 16, 1917, for the construction of the United States Postoffice at McComb, Miss. Drawings and specifications may be obtained from the custodian of the site at McComb, Miss., or at this office, in the discretion of the Supervising Architect. Drawings and specifications will be ready for delivery after Jan. 5, 1917. JAS. A. WETMORE, Acting Supervising Architect.

Bids close February 12, 1917.

TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., December 30, 1916. Sealed proposals will be opened in this office at 3 P. M. February 12, 1917, for the construction, complete, of the United States Postoffice at Moultrie, Ga. Drawings and specifications may be obtained from the custodian of site at Moultrie, Ga., or at this office, in the discretion of the Supervising Architect. JAS. A. WETMORE, Acting Supervising Architect.

Bids close January 15, 1917.

\$25,000 Drainage Bonds

Notice is hereby given that the Commissioners of Rileys Drainage District, Greenwood County, South Carolina, will on January 15, 1917, at the offices of Grier, Park & Nicholson, Greenwood, S. C., at three o'clock P. M., sell the coupon bonds of the Drainage District, for the sole purpose of drainage, not exceeding the sum of twenty-five thousand (\$25,000) dollars, payable 25 years from date, with interest not to exceed six per cent. The district consists of about fifteen hundred (1500) acres of bottoms, situated in the northern part of Greenwood County. The estimated value of the lands is about \$75 per acre. Bidders will be required to deposit a certified check in the sum of \$1000, payable to the Commissioners, to secure their bids.

Bids sealed or opened.

JAMES F. MACENROE,
S. C. RILEY,
S. O. HARVEY,

Commissioners of Rileys Drainage Dist.
December 18, 1916.

Bids close January 11, 1917.

\$250,000 5% Bonds

Donaldsonville, La., December 9, 1916.

Sealed bids will be received up to Thursday, January 11, 1917, at 11 o'clock A. M., and opened at the regular quarterly meeting of the Board of Commissioners of the Lafourche Basin Levee District, to be held in Donaldsonville, La., on said day and date, for the purchase of Two Hundred and Fifty Thousand (\$250,000) Dollars of serial bonds of the Lafourche Basin Levee District, bearing interest at the rate of five (5) per cent. per annum, to mature serially as provided in Act 183 of 1916, and to be issued in accordance with the provisions of said act.

Bids should be addressed to the undersigned and superscribed, "Bid for Serial Bonds of the Lafourche Basin Levee District."
Full information will be furnished upon application to the undersigned.
The privilege is reserved to reject any and all bids.

JOHN F. TRUXILLO,
Assistant Secretary Board of Commissioners
of Lafourche Basin Levee District,
Donaldsonville, La.

Bids close January 22, 1917.

\$760,000 4½% Bonds

Fairmont, W. Va.

Sealed bids will be received until noon January 22, 1917, by J. Walter Barnes, Commissioner of Finance, for \$760,000 4½ per cent. City of Fairmont bonds, dated January 1, 1917.

Write for detailed information.

Bids close January 29, 1917.

Vitrified Brick Paving

Sealed bids will be received by the Board of Public Works of Gainesville, Florida, until January 29, 1917, at 7.30 P. M., for approximately 15,000 square yards of vitrified brick paving on West University Avenue. Specifications may be obtained from I. E. Webster, Secretary. Certified check for \$1000 must accompany each bid. The right to reject any or all bids is reserved.

H. E. TAYLOR,
Chairman Board Public Works.
G. H. CAIRNS,
City Engineer.

Road Construction

The County Commissioners of Rockingham County desire to communicate with contractors for building topsoil roads. Address all communications to J. P. McMichael, C. B. C., Wentworth, N. C.

Bids close February 14, 1917.

Agricultural Building and Girls' Dormitory at West Virginia University

NOTICE TO CONTRACTORS.

Morgantown, W. Va.

Sealed bids will be received by the State Board of Control until noon of the 14th day of February, 1917, at its office in Charleston, W. Va., for doing all work and furnishing all materials necessary to complete the buildings described below according to plans and specifications prepared by Paul A. Davis 3d, Architect, 1713 Sansom Street, Philadelphia.

One Agricultural Building, 85' 9" wide by 188' long, three stories and basement, with slate roof, including the heating, plumbing and electrical work. Ground floor of cement, first floor reinforced concrete, second and third floors of wood-joint construction. Brick walls, with terra-cotta and limestone trimmings.

One Girls' Dormitory Building, 42' 9" wide by 229' 4" long, with one porch 12' 11" wide by 66' ½" long, three stories and basement, with slate and composition roof, including the heating, plumbing and sewerage and electrical work. The ground floor of cement, and first, second and third floors of reinforced concrete. Brick walls, with terra-cotta and limestone trimmings.

General contractors can secure plans and specifications by addressing the office of the State Board of Control, Charleston, W. Va., accompanying their request with check of \$10, same to be refunded only when bid is received accompanied by proposal bond, as required in the specifications, otherwise check to be retained.

Subcontractors can secure plans and specifications by deposit of two \$5 checks, one of which will be refunded on return of plans and specifications.

All bids must be sealed, plainly addressed to the State Board of Control, Charleston, W. Va., and marked in a conspicuous place on the envelope, "Bid on West Virginia University Buildings."

Public opening of bids will be held at the office of the State Board of Control at 2 P. M. the 14th day of February, 1917.

Immediately after contract is awarded the successful bidder will be required to execute proper contract with guaranty company bond in a penalty equal to one-half the amount of the contract price, said bond to be conditioned for the construction and completion of the work as set forth in plans and specifications, free of all claims for labor and material, both of said buildings to be completed not later than July 1, 1918.

All bids must be made on forms filed with the specifications. The right is reserved to reject any and all bids.

STATE BOARD OF CONTROL,

J. S. LAKIN, President,
Charleston, W. Va.

Bids close February 6, 1917.

Dormitory and Academic Building

Sealed proposals will be received by the Board of Trustees of the State Normal School, Athens, Ga., until noon, Eastern time, of February 6, 1917, for the erection of a Dormitory and Academic Building. Plans and specifications may be had by depositing a certified check for \$25 with Mr. Jere M. Pound, Pres., Athens, Ga.

Bids close January 18, 1917.

Courthouse

Georgia, Lee County.

Bids will be received by T. S. Burton, Chairman of the Building Committee of Lee County, Ga., in the office of the County Clerk in Leesburg, Ga., until January 18, 1917, at 10 o'clock A. M., for the erection of a courthouse for the said county. To be two stories; to contain offices for all necessary county officials, courthouse and jury rooms, etc.; to be built of brick, hollow tile and concrete frame with limestone trimmings; slate roof and copper tower. Building will be heated by one pipe, low-pressure steam system, and is to cost not exceeding \$40,000. The construction of said building to begin within fifteen days after awarding the contract and to be completed within eight months from this date.

Payments for work and material to be made from time to time on estimates furnished from the contractor and approved by the architect, averaging 85% of the work done and material on the ground. Balance of 15% to be paid when the building is fully completed and accepted by the architect and building committee.

Each bidder to deposit with his bid a certified check for \$1000, payable to T. S. Burton, Chairman of the Building Committee, or his successor, as a guarantee that he will enter into a contract with the county upon the terms of his bid within fifteen days after its acceptance and give bond with security for the faithful performance of his contract in the sum of 20%, and that upon his failure to enter such a contract and give bond said check to be retained by the Secretary, or his successor, as liquidated damages.

Plans and specifications may be procured by contractors wishing to make a bid on same on a deposit of \$25 with T. S. Burton, Chairman of the Building Committee, or with the Architect, J. J. Baldwin, Anderson, S. C. Plans will also be on file in the office of the Chairman and in the office of the Architect.

The Building Committee reserves the right to reject any and all bids.
This 12th day of December, 1916.

T. S. BURTON,
Chairman for Building Committee.
J. J. BALDWIN, Architect.
Anderson, S. C.

Contractor's Equipment For Sale

8 Baldwin & Davenport Dinkie Engines.

1 Porter 14x24 Std. Gauge Dinkie.

99 Western 4-yd. dump cars.

2 Bucyrus, 70-C Shovels.

1 Marion Model 75, with long boom.

3 Drag Lines, booms 40' to 80'.

2 Portable Excavators.

3 Champion Jaw Crushers.

1 Gates No. 6, K, Crushing Plant.

3 Rotary Dryers.

4 Pulverizers.

1 Austin Dry Land Dredge.

2 Fairbanks 1-yd. dredges, steel hull.

DONAHUE & COMPANY

20 West Jackson St. Chicago, Ill.

LOCOMOTIVE CRANES

1 20-ton McMyler Interstate, 50' boom.
1 15-ton Brown Hoist, 45' boom.
1 15-ton Browning, 4-wheel, single drum, 35' boom.

INDUSTRIAL TRACK

3 miles 36" gauge Industrial Track, 30-lb. rail.

DINKEYS AND CARS

10 1½-yard Koppel Cars, heavy duty, 36" gauge, practically new.
2 7x12" 4-wheel Davenport Dinkeys, 36" gauge, practically new.

H. KLEINHANS COMPANY
Oliver Building Pittsburgh, Pa.

Trustees' Sale of Coal Lands

FOR SALE OR LEASE—1100 Acres Coal Lands, Bell County, Ky. Two workable seams; easy mining; self-drainage.

Trustees

Philadelphia Veneer & Lumber Co.
817 N. 5th Street Philadelphia, Pa.

Bids close January 24, 1917.

Wharf and Causeway

New Orleans, La., December 17, 1916.

Sealed proposals will be received by the Board of Commissioners of the Port of New Orleans until January 24, 1917, 8 P. M., for the construction of the Dumaine Street Creosoted Wharf and Reinforced Concrete Causeway, with creosoted wood-block roadway.

Board of Commissioners of the Port of New Orleans furnishing all creosoted piling, lumber and wood block, bidders to furnish all labor and other material.

Deposit—\$15,000 cash or certified check.

Payment—Monthly to the extent of 80 per cent. of the Engineer's estimate of work accomplished, including allowance for a reasonable stock of material.

Bond—Fifty (50%) per cent. of the value of the contract.

On and after December 21, 1916, plans and specifications will be on file at the office of the Chief Engineer, J. Devereux O'Reilly, by whom full sets will be furnished to prospective bidders on deposit of \$20, which will be refunded to depositors who submit proposals and return sets in good condition.

To depositors not submitting proposals \$10 will be refunded on return of set in good condition.

The right is reserved to reject any and all bids and to waive any informality in the bids received.

B. B. HANS, President.

Bids close January 17, 1917.

Steel Highway Bridge

The Supervisor and Commissioners of York County, S. C., will open bids on January 17, 1917, for the erection of one steel highway bridge, 980 ft. long, across Catawba River.

Plans and specifications on file with W. W. Miller, County Engineer, Rock Hill, S. C.

WANTED To Let Contract

For approximately 500,000 yards excavation. Steam shovel and all necessary plant on the ground ready for work. Will sell or rent the plant. First-class proposition for an experienced contractor. Address

EXCAVATE

Care Manufacturers Record, Baltimore, Md.

Generator and Switch Board

FOR SALE

One new 175 K. V. W. Generator and Switch Board, manufactured by Allis-Chalmers Mfg. Co. about one year ago. Never used and now in factory of Ames Iron Works, Oswego, N. Y. Reason for selling, have purchased complete plant.

BOARD OF BOND TRUSTEES

South Jacksonville, Fla.

GRAVITY CONVEYOR

For Sale

300 ft. Roller Gravity Conveyor.
Address

PENICK & FORD, Ltd. New Orleans, La.
Purchasing Department

WANTED

ORANGE PEEL BUCKET

One 12 to 15 cubic feet orange peel bucket.

A. C. TUXBURY LUMBER CO.
P. O. Box 843 Charleston, S. C.

BUCKEYE GAS ENGINE FOR SALE

Single Acting Tandem 14x18 Buckeye Gas Engine—4-stroke cycle, 228 Rev., 125 H. P., belted, subject to inspection and immediate delivery. High price of gas reason for selling.

THE QUEEN CITY PRINTING INK CO.
Cincinnati, Ohio